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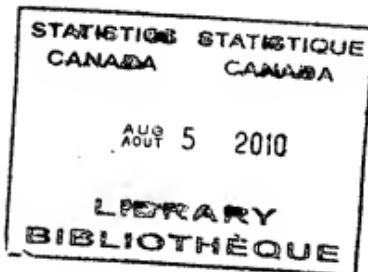
The Female Worker in Canada

BY SYLVIA Ostry



The Female Worker in Canada

by
Sylvia Ostry



ONE OF A SERIES OF LABOUR FORCE STUDIES
in the
1961 CENSUS MONOGRAPH PROGRAMME

DOMINION BUREAU OF STATISTICS
OTTAWA, CANADA
1968

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Foreword

The Canadian Censuses constitute a rich source of information about individuals and their families, extending over many years. The census data are used widely but it has proved to be worthwhile in Canada, as in some other countries, to supplement census statistical reports with analytical monographs on a number of selected topics. The 1931 Census was the basis of several valuable monographs but, for various reasons, it was impossible to follow this precedent with a similar programme until 1961. Moreover, the 1961 Census had two novel features. In the first place, it provided much new and more detailed data, particularly in such fields as income, internal migration and fertility, and secondly, the use of an electronic computer made possible a great variety of tabulations on which more penetrating analytical studies could be based.

The purpose of the 1961 Census Monograph Programme is to provide a broad analysis of social and economic phenomena in Canada. Although the monographs concentrate on the results of the 1961 Census, they are supplemented by data from previous censuses and by statistical material from other sources. The present Study is one in a Series on the Canadian labour force. In addition to these Labour Force Studies, monographs will be published on marketing, agriculture, education, fertility, urban development, income, immigration, and internal migration.

I should like to express my appreciation to the universities that have made it possible for members of their staff to contribute to this Programme, to authors within the Dominion Bureau of Statistics who have put forth extra effort in preparing their studies, and to a number of other members of DBS staff who have given assistance. The Census Monograph Programme is considered desirable not only because the analysis by the authors throws light on particular topics but also because it provides insight into the adequacy of existing data and guidance in planning the content and tabulation programmes of future censuses. Valuable help in designing the Programme was received from a committee of Government officials and university professors. In addition, thanks are extended to the various readers, experts in their fields, whose comments were of considerable assistance to the authors.

Although the monographs have been prepared at the request of and published by the Dominion Bureau of Statistics, responsibility for the analyses and conclusions is that of the individual authors.

George S. Duggett
DOMINION STATISTICIAN.

Preface

This is one in a series of studies dealing with selected aspects of the labour force in Canada as revealed, in the main, by the 1961 and earlier Censuses. The present study reviews, insofar as data permit, the historical trends in the labour force activity of women over the course of this century. In particular, it focuses on the married women who have entered the labour market in increasing numbers in recent decades and whose activity, in this respect, is a matter of widespread interest both for economic as well as social and cultural reasons.

Portions of this Study have been published in *Changing Patterns in Women's Employment* (Women's Bureau, Canada Department of Labour, 1966). Since the first draft was completed, further work on the labour force participation of married women, undertaken at D.B.S., has provided more insight into many of the matters touched on in this present Study. This research, largely of an econometric nature, will be released at a later date in another series of publications.

The author wishes to thank members of the Census Division of the Bureau for their cooperation and assistance in providing data. I am most grateful, too, to Miss Marion Royce (formerly Director, Women's Bureau, Department of Labour); Professor Noah Meltz (University of Toronto) and Professor J.D. Allingham (University of Western Ontario and Australian National University) for their helpful comments and criticism. Most of all, I would like to express my deepest gratitude for having had the opportunity to discuss this Study on many occasions with the late Miss Yoshiko Kasahara, who gave so generously of her time, her expertise and her wisdom. The errors and deficiencies in the research are, of course, entirely my own.

Sylvia Ostry,
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1. *Introduction*

In our society the adult male is expected to work throughout most of his adult life. His labour force membership is close to being autonomous: the element of choice is small. Few women, however, work throughout their lives. The working life of most men is characterized by continuity: they enter the labour force after completion of schooling and, employed or unemployed, they remain in the labour market until they are able to (or are forced to) retire. The working life of most women is characterized by discontinuity: they may enter and leave the labour force several times over the course of their lives. The reason for this is that most women, unlike most men, are free to choose among many different types of activity: paid employment, leisure, volunteer work, work in the home. It is true that this freedom is not boundless: at different stages of a woman's life it is closely circumscribed by family responsibilities; at different periods in the life of the community it has been severely limited by prevailing mores and social attitudes. None the less, the element of choice in the labour market behaviour of women in our culture is significant and it is this element which accounts for the characteristic variability — over time and space — of female labour force activity.

Other Studies in this Series will trace the long-run trends in female labour force attachment as well as the occupational and industrial patterns of female employment. In this present Study it is proposed to explore the labour force behaviour of women in somewhat more detail, as of a given point in time — that of the 1961 Census. Investigation of the influence on female participation of factors such as education, income, marital status and family size has been severely hampered in Canada because of the paucity of relevant data.¹ As will be evident in what follows, problems of data scarcity have by no means been solved. But at least one can make a start in exposing some of the underlying reasons governing the labour market activity of the female population.

This Study consists of three main sections. The first comprises an examination of the working life cycle of women in Canada — a profile of

¹ Cf. *Women at Work in Canada*, Department of Labour, (Ottawa: Queen's Printer, 1964), and Dominion Bureau of Statistics, Special Labour Force Studies No. 5, *Women Who Work: Part 1*, by John D. Allingham, (Ottawa: Queen's Printer, 1967). See also Special Labour Force Studies No. 1, Series B, by Allingham, *The Demographic Background to Change in the Number and Composition of Female Wage Earners in Canada, 1951-1961*, (Ottawa: Queen's Printer, 1967).

labour force membership by age and other demographic characteristics. Of necessity, this examination must be confined to the pattern of participation as it existed in 1961. But some analysis of cohort profiles of participation will provide an historical background to the present cross-sectional picture. The second part of the Study considers the influence of other variables on the labour market behaviour of women. Limitations of data preclude the use of sophisticated methodology¹ but permit a comparison of participation rates of women grouped according to selected characteristics, such as their educational level, the income of their husbands, whether or not their husbands were fully employed over the year, etc. By penetrating behind the aggregates and averages which usually characterize the analysis of female labour force participation in Canada, it is possible to reveal some meaningful patterns of activity and point to areas of further investigation.

Finally, it has been demonstrated² that an important factor influencing the secular increase in female participation has been the rise in women's earnings. While a formal analysis of the relationship between trends in earnings and labour force activity was not possible because of lack of time series data, a brief concluding section on male-female earnings relativities (as revealed in the 1961 Census) is presented both because of its broad relevance to the present topic as well as its intrinsic interest.

¹ See, however, the regression results described in the Appendix. Further, since this was written a great deal of specially tabulated Census data has been prepared for use in multiple regression analysis. This will permit a more systematic examination of the effects of a variety of variables such as income of husband, earnings of wife, education of wife, stage of family formation, etc. As mentioned in the author's *Preface*, the findings of this research will be published in another series of Dominion Bureau of Statistics publications (Special Labour Force Studies, Series B).

² See especially Jacob Mincer, "Labor Force Participation of Married Women", in *Aspects of Labor Economics*, A conference of the Universities—National Bureau Committee for Economic Research, Princeton, 1962, pp. 63-97.

2. *The Working Life Cycle*

HISTORICAL BACKGROUND: COHORT PARTICIPATION PROFILES

There has been a remarkable rise in the participation of women over the course of this century. From a low of just over 14 per cent in 1901, the proportion of adult women with labour force membership rose to almost 30 per cent by 1961 — more than double the level at the turn of the century. In 1901 women accounted for less than 15 per cent of the labour supply of this country: by 1961 more than one-quarter of Canadian workers were female. From Table 1, it may be seen that while the participation rate rose

Table 1 — Female Participation Rates: Canada, 1921-1961

NOTE.— These rates are based on decennial census data revised to take account of changes in census concepts and coverage. They include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services and exclude inmates of institutions. For details of revision see *Historical Estimates of the Canadian Labour Force* by Frank T. Denton and Sylvia Ostry, One of a Series of Labour Force Studies in the 1961 Census Monograph Programme, (Ottawa: Queen's Printer, 1967).

Year	Age								
	14-19	20-24	25-34	35-44	45-54	55-64	35-64	65 and over	14 and over
1921	29.6	39.8	19.5	12.2 ^a	n.a.	n.a.	12.0	6.6	19.9
1931	26.5	47.4	24.4	14.3	12.9	11.3	13.2	6.2	21.8
1941	26.8	46.9	27.9	18.1	14.5	11.1	15.2	5.8	22.9
1951	33.7	48.8	25.4	22.3	21.1	13.5	19.8	4.5	24.4
1961	31.7 ^b	50.7	29.2	31.2	32.8	23.1	29.9	6.1	29.3

^a Women 35-49.

^b Women 15-19.

for women in each of the age categories, by far the greatest increase in labour force activity was demonstrated by women in the middle age groups, 35-44 and 45-54.¹ A majority of women of this age are, of course, married: on average, around 80 per cent of these two cohorts were married in 1921 and the proportion has not changed very much subsequently although, for the age group 35-44, it was somewhat higher in 1951 and 1961 than earlier in the century. Therefore, the increase in participation of these middle-aged

¹ Insufficient age detail in the 1921 Census precludes even rough estimation of participation rates for women 45-54. But their rate was certainly lower than that of women 35-44 and therefore the per cent rise in the rate over the four decade period was certainly the highest for any age group. The gainfully occupied rate for women 50-64 years of age in 1921 was 10.0 per cent. See *1921 Census*, Vol. IV, p. XXIV.

THE FEMALE WORKER IN CANADA

women has meant a marked increase in participation of *married* women and, presumably, of women *with children*.¹

Unfortunately, almost no historical data on the labour force activity of married women in Canada exist—a most serious deficiency in our economic information. Fragmentary statistics from the 1941 Census² suggest a (gainfully occupied)³ participation rate for married women of less than 4 per cent. By 1951, the participation rate of married women was 11.2 per cent and in 1961 it had climbed to just over 22 per cent. Thus, in the twenty years between 1941 and 1961, the proportion of married women who entered the labour market in this country increased more than five times—a far more dramatic rise than that exhibited for women as a whole.

While no information on the labour force classified by age and marital status was provided in the 1951 Census, in Table 2 "wage-earner participation rates" of married women, by age, for 1951 and 1961 are presented to give some notion of the changes which took place in the labour force activity of these women over the last intercensal decade. These rates are lower than actual participation rates since married female wage-earners formed about 85 per cent of the married experienced female labour force in 1951 and 1961, the remainder being either self-employed or unpaid family workers.⁴ But the relationships exhibited by these data are certainly indicative of the changing pattern of participation during this period and they are presented for that reason. The rates for single and other (widowed and divorced) women are included for comparison.

It is evident from Table 2 that, while the "participation rate" of married women of all ages increased substantially over this decade, the most remarkable rise occurred among women between the ages of 35 and 64. Further, it should be noted, the participation "profile", which will be discussed at greater length in both this and the following section, changed

¹ Only a small minority of ever-married women aged 35-44 and 45-54 are childless. Information from the 1921 Census reveals that for women 35-44, only 13 per cent had never had a child; the comparable figure for those 45-54 was 12 per cent. See 1941 Census, Vol. III, p. 682. In 1961 the same ratios were 9.7 per cent and 14.1 per cent respectively. There was a decline in the average number of children ever born to women in these age cohorts between 1941 and 1961. The average estimated from the 1941 Census was 3.59 and 4.28 (for women aged 35-44 and 45-54). In 1961, it was 3.20 and 3.17. By 1961, however, the average number of children ever born to younger women i.e. below the age of 35, was higher than in 1941. No other data of this type are available from any other Census.

² See 1941 Census, Vol. III, p. 94 and Vol. VII, p. 55.

³ Cf. Denton and Ostry, *Historical Estimates...*, op. cit., for discussion of the gainfully occupied and labour force concepts.

⁴ This proportion varies somewhat by age. No information is available for 1951, but in 1961 married wage-earners were a higher proportion of the married experienced labour force in the younger age groups (under 35 years).

dramatically between 1951 and 1961. In 1951, these participation rates declined at each subsequent age after reaching a peak at ages 20-24. By 1961, however, the "two peak" profile had emerged, reflecting the marked rise in labour force activity of women between the ages of 35-44. In the United States, the "two-phase working life" as it is often termed, had already emerged by 1950. In the United States, however, female participation rates are very much higher than the Canadian rates at every age.

Table 2 - Female Wage Earners, by Age and Marital Status,
as a Percentage of the Female Population:
Canada,^a 1951 and 1961

Date and married status	Age							
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	15 and over
Married								
1951	15.9	16.8	10.7	10.5	8.9	4.4	1.2	9.6
1961	23.1	25.7	18.7	21.0	21.1	11.9	2.2	18.5
Percent increase in rate, 1951-61 ...	44.9	53.3	73.9	100.0	138.9	168.0	83.3	93.2
Single								
1951	37.9	76.3	76.0	71.1	64.1	49.3	16.9	56.3
1961	33.0	80.4	79.2	74.5	68.7	56.4	19.7	52.6
Percent increase in rate, 1951-61 ...	-12.8	5.4	4.1	4.7	7.1	14.4	16.4	-6.5
Widowed and divorced								
1951	37.0	55.5	55.8	49.1	35.6	19.1	3.3	16.0
1961	45.6	59.6	57.5	54.3	48.6	29.3	4.4	19.7
Percent increase in rate, 1951-61 ...	23.2	7.3	3.0	10.5	36.3	53.4	34.2	22.9

^a Excluding Yukon and the Northwest Territories.

SOURCE: Based on unpublished data from the 1951 and 1961 Censuses.

Finally, the comparison between the 1951-61 changes in participation of married women, on the one hand, and single and widowed and divorced on the other, is revealed most dramatically in Table 2. The increase in participation of these other groups is very much less than that of married women. The slight decline in the participation of single women shown in Table 2 is attributable to a strong shift, between 1951 and 1961, in the age composition of the female population toward the 15-19-year group. The 1961 rate for single women 15 years and over, standardized on the basis of the 1951 age mix, was actually 56.7 per cent, a slightly higher rate than in

1951.¹ None the less, it is clear that the striking increase in female labour market activity over the last intercensal decade was almost entirely due to increasing participation on the part of *married* women. Further, it should be observed that the "participation profiles" of the other two groups did not change between 1951 and 1961 as did that for married women, and the emergence of the two-phase working life cycle in 1961 was attributable to the changing participation pattern of married women.

This brief review of trends in female participation has centred on changes decade by decade, in the participation of women in a given age group. This is, in fact, the usual way of looking at these labour force developments. But a different, and in some respects more meaningful, view is provided by tracing the participation profile of a given *cohort*, i.e. a group of women born in the same time period. In this way, one can examine changes in the labour market activity of these women² as they age and as their circumstances, familial as well as social and economic, change. Cohort analysis is not a substitute either for conventional trend analysis or cross-section investigation. It is, however, a useful supplement to such studies, resting, as it does, on the assumption that the experience and behaviour of a group of young women in the first phase of their working life will affect their behaviour in later years.

Unfortunately, our incursion into cohort analysis must be a limited one because of very severe data deficiency. Absence of age detail in earlier Censuses and, even more serious, the complete lack of historical information on the marital status of women in the labour force, greatly restricted exploration in this area. Table 3 presents the maximum available information on the participation profiles of the 15-24-year-old female cohort born in each decade since 1877.³ Chart 1 traces these profiles, or at least the portions of them which are available from the information in Table 3.

Even the incomplete picture of Chart 1 reveals clearly that the cohort profiles of female participation in Canada have changed markedly over the century. For the group of women who entered the labour force in the early

¹ For a full analysis of the demographic changes underlying the changes in the female wage-earner labour force between 1951 and 1961, cf. Allingham, No. 1, Series B., *op. cit.* Of the total increase in numbers between the two Census dates, 74 per cent is allocated to a rise in participation and just under 25 per cent to demographic change.

² Over time the cohort in the labour force does not represent the same group of women of course. Apart from movements in and out of the labour force and mortality, migration flows, which are of considerable importance in Canada, will produce a good deal of change in the cohort group over time.

³ These data are essentially those of Table 1, rearranged for presentation in cohort form.

years of this century, there was very little change in participation between the ages of 35 and 64 and a sharp decline thereafter. The 1921 "generation", who came of working age during and just after the First World War, behaved very differently. After a phase of declining participation which extended until the ages of 35-44,¹ these women began to re-enter the labour market in middle and late middle age during a decade which, it should be noted, straddled another major war. This new phase of re-entry was much more sharply in evidence in the case of the 1931 cohort, although the profile here is incomplete. By 1941 the evidence is very fragmentary indeed. But from the information which is available, it appears that the women who entered the labour market in the early years of World War II withdrew in relatively greater number (in the initial period of declining participation) than did the 1931 generation, but then they also re-entered at an earlier stage than the 1931 cohort, since their participation rate rose sharply (instead of declining further) after the age of 34. The only information available for the 1951 cohort suggests an equally steep decline in the first portion of the working life cycle.

¹ These 10-year age groups are too broad to reveal the full detail of the working cycle of the female cohorts. Cross-sectional information shows that women increase their participation during their teens (see Table 1) and thus these data mask an initial phase of rising labour market activity up to about the middle twenties and thereafter a decline.

Table 3 - Female Cohorts, 15-24 Years: Participation Rates:
Canada, 1921-1961

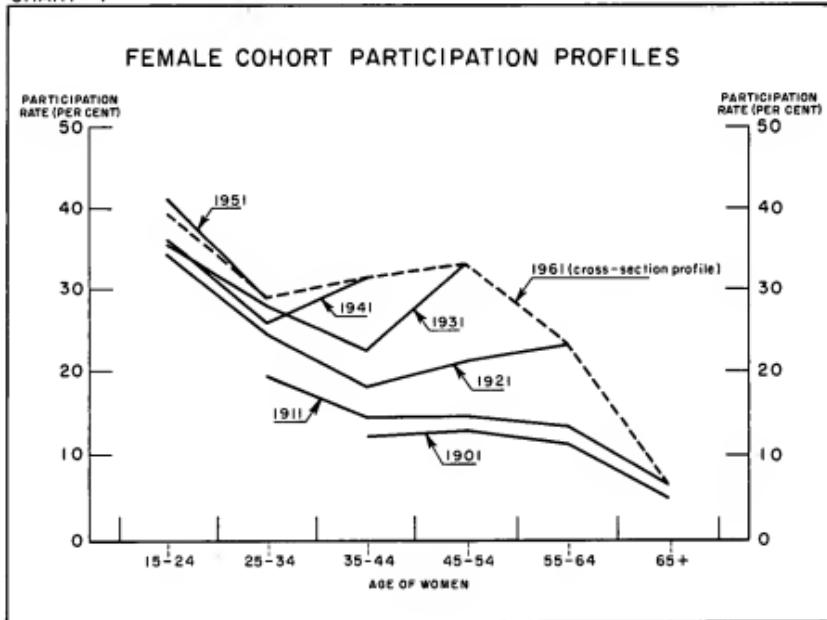
Date at which cohort was:		Participation rate of cohort in:				
Born	15-24 years	1921	1931	1941	1951	1961
1877-1886	1901	12.2 ^a	12.9	11.1	4.6 ^c	
1887-1896	1911	19.5	14.3	14.5	13.5	6.2 ^c
1897-1906	1921	34.1 ^b	24.4	18.1	21.1	23.1
1907-1916	1931		35.3 ^b	27.9	22.4	32.9
1917-1926	1941			35.6 ^b	25.5	31.2
1927-1936	1951				41.0 ^b	29.1
1937-1946	1961					39.5

^a Excludes a few Indians on reservations. Includes women 35-49 years. ^b Participation rate of women 14-24 years. Absence of age detail in earlier Censuses precluded removal of 14-year-olds. ^c Participation rate of women 65 and over.

SOURCE: Based on data from 1961 and earlier Censuses and Denton and Ostry, *Historical Estimates*, op. cit.

To summarize, these cohort profiles have shifted markedly over this century and the essence of the shift has been the emergence of a "two-phase" working life cycle caused by the re-entry of middle-aged women into the labour market after withdrawal in early adulthood. From the evidence above on wage earners it seems that it is married women who withdrew from

CHART - I



the labour market during the early period of family formation and then re-entered in middle age. In recent decades, the decline in participation after the first peak has been steeper than formerly and the timing of re-entry appears to have shifted forward, i.e. the rise in the participation rate for each successive cohort seems to be taking place earlier in life. Changes in marital and fertility patterns over the course of this century have probably been important factors here. Women are marrying and starting their families earlier, and they are younger when their last child enters school. Thus, the average age at first marriage which was 24.4 years in 1940 had declined

to 22.9 by 1961.¹ Further, in 1941, only 56 per cent of women under the age of 45 had had their first child before their twenty-fifth birthday: by 1961, this proportion had reached 70 per cent.² Finally, the age-specific fertility rates of women over the age of 35 have been falling quite markedly since the end of World War II,³ suggesting that the effective reproduction period of women today is completed much earlier than was the case 10 or 15 years ago.

One other fact of importance emerges from the cohort picture in Chart 1. With the exception of the 1941 profile, each successive cohort profile lies above that of the preceding "generation". In other words, it appears that a larger proportion of each successive generation of women has entered the labour force and this early labour market experience influenced their labour force behaviour in later years, i.e. a group which participates more in the early years of working life, participates more at every subsequent age. Thus not only have the age-to-age changes in female participation shifted, but the *level* of participation at each age has shifted as well. It is this latter shift which has been observed in trend tables of participation by age.

Finally, the 1961 cross-section profile (represented by the broken line in Chart 1) was included for purposes of comparison. The cross-section profile represents the participation rates, as of 1961, of six (ten-year) cohorts, whereas the cohort profile represents the rates of a *single* cohort as it ages. If the cohort profiles were identical for each successive generation, the cohort and cross-section profiles would be the same.⁴ As noted, the cohort profiles have not been stable at all, but have shifted quite markedly, although signs of stability appeared to be emerging for more recent generations. Because of the instability of the cohort participation experience, the 1961 cross-section participation profile looked rather

¹ Data are not available prior to 1940. See *Dominion Bureau of Statistics, Vital Statistics*, (Ottawa: Queen's Printer, 1961).

² *Ibid.*, 1941, 1951, 1961.

³ *Ibid.*, 1961, Table B6, p. 99. Thus the fertility rate for women 35-39 fell from 93.3 in 1946 to 81.1 in 1961; for women 40-44 it fell from 34.5 to 28.5 and for those 45-49, from 3.8 to 2.4.

⁴ The easiest way to see this is by examining Table 1. If the first two columns of Table 1 were combined to give a rate for women 14-24, and if each row of Table 1 was identical, then the "diagonals" (which represent the cohort profiles) would resemble the rows. In a square table (or matrix) the main diagonal—the complete cohort profile—would be identical to the rows—the cross-section profiles.

different from the other profiles in Chart 1. But there was some resemblance, none the less. The rise in participation after the age of 34 (which had appeared in the 1941 cohort profile) was in evidence—the "two-phase" working life cycle, with the "earlier" re-entry into the labour market, thus showed up in the 1961 cross-section. As has already been pointed out (see Table 1) the 1951 cross-section profile exhibited no such second phase. Thus the 1961 cross-section profile bore a greater resemblance to the more recent cohort profiles than did the 1951 cross-section. (This contrast between 1951 and 1961 was also noted in the "wage-earners' participation" profiles of married women described above.) Of course, these data are so fragmentary that it is difficult to draw any firm conclusions. The chief purpose of commenting on the comparison between the 1961 cross-section and the cohort profiles is to point out that, confining further discussion to the 1961 picture, which is necessitated by the absence of other data, should not seriously distort the broad analysis of the working life cycle of women in Canada.¹

CROSS-SECTION PARTICIPATION PROFILES: 1961

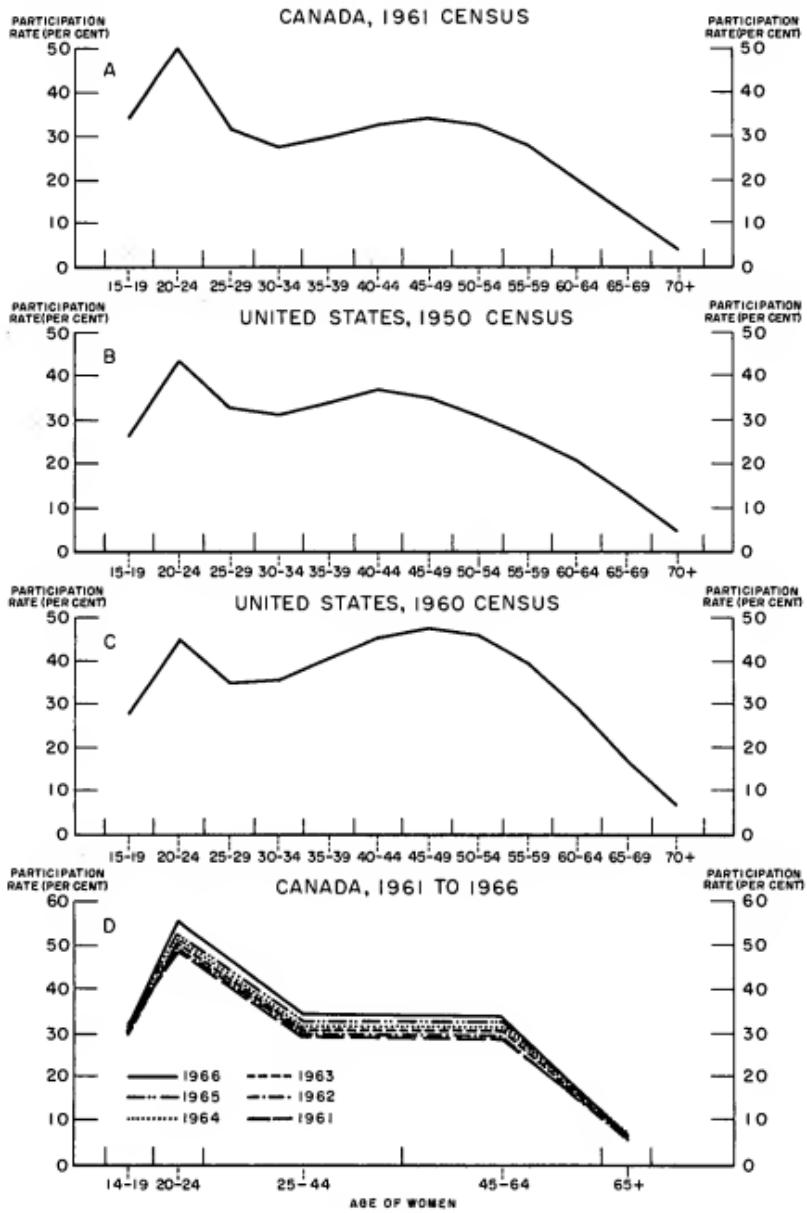
Age

The now-familiar pattern of female labour force participation by age is presented once again in Chart 2A which provides, however, somewhat finer age detail. As may be observed from this Chart, a sharp rise in participation followed initial entry into the labour market: just over one-third of teen-age girls had a labour force attachment but this proportion rose to one-half for young women 20-24 years of age. This was the peak participation rate observed for women as a whole. After their mid-twenties, as most women married and began to have children, a smaller and smaller proportion remained in the labour market. At the low point, around the age of thirty or slightly later, some 28 per cent of women were in the labour force. After this, the second phase of the working life cycle is clearly seen, with gradually rising participation to a second, though considerable lower, peak at ages 45-49. About one in three women of this age was in the labour force—approximately the same proportion as was observed for teen-agers. Thereafter, the ratio of labour force to population declined, slowly at first, then, after the age of 50, much more rapidly.

¹ Cf. Richard N. Rosett, "Working Wives: An Econometric Study", *Studies in Household Economic Behaviour*, (New Haven: 1958), pp. 53-62, for a similar discussion of the American data.

CHART-2

FEMALE PARTICIPATION PROFILE



It is of interest to compare the Canadian profile charts of female participation with those for the United States since in this sphere of activity, as in so many others, many of the same influences are present in both countries—although often they are manifested in Canada only after some time lag. Thus there was a striking resemblance between the 1961 Canadian profile and that for the United States in 1950 (Chart 2B). It should be noted, however, that even in 1950 the "second peak" was somewhat higher in the United States than in Canada, i.e. in 1950 the return flow of middle-aged (married) women into the labour market was already more advanced in the United States than it would be in Canada a full decade later. But, as is seen in Chart 2C, by 1960 the United States profile had evolved further: the "second peak" participation rate had risen well above the first. A similar evolution in Canada by 1971 seems highly unlikely, judging from the mid-decade profile shown in Chart 2D, (based on annual averages of the monthly survey data). It is apparent that there has been a general increase of female participation in Canada, affecting women in all but the youngest and oldest age groups but the "second phase" of working life in the profile was no more prominent in 1966 than it had been in 1961. The reasons for this differential development in the two countries are certainly worthy of exploration but must be the subject of another study.

Residence

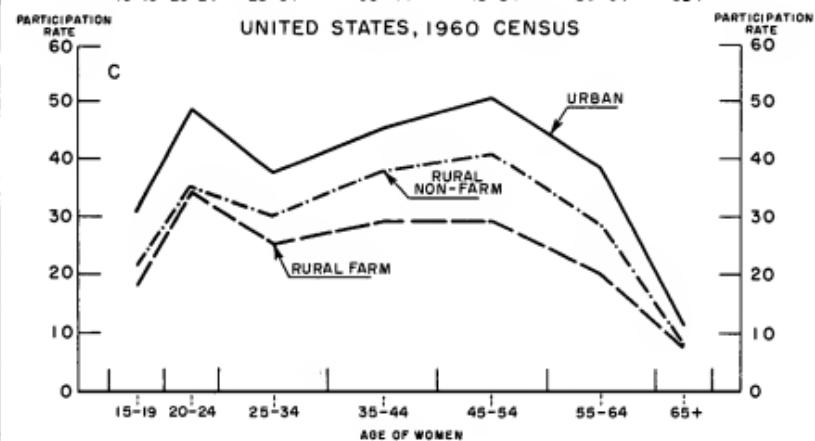
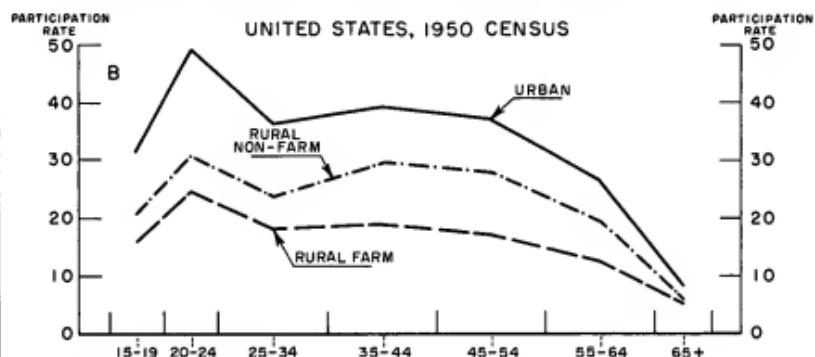
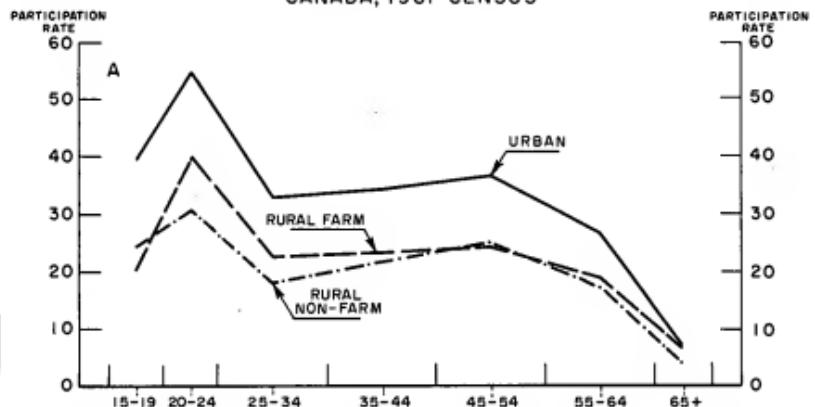
As is clear from Chart 3A labour force participation was much higher for urban women, at every age of the working life cycle, than for women living in rural areas. The jobs which opened up in number for women (the white collar, trade and service jobs) were concentrated in urban centres while employment opportunities remained limited on the farms or in small villages in rural non-farm areas. A marked difference in the extent and nature of job opportunities was probably the chief factor accounting for the urban-rural difference in levels of participation of women. However, other considerations which probably affected the participation, especially of married women, should be mentioned. These would include differences in social attitudes to women working for gain—people living in rural areas are probably still more conservative in this respect than are city-dwellers; the higher birth rate in rural areas, which increases the burden of household duties and the lack, in rural areas, of many household conveniences which also increases the work-load of women in the home and discourages married women from seeking outside jobs.

All other things being equal, the reasons just proffered in explanation of the urban-rural differential in female participation rates would lead us to expect that the ratio of female labour force to female population would have

CHART-3

FEMALE PARTICIPATION PROFILE BY RESIDENCE,

CANADA, 1961 CENSUS



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been higher in rural non-farm than in farm areas, as it was, for example, in the United States (see Charts 3B and 3C). Thus, women in non-farm areas would, in general, have greater access to urban employment opportunities than would farm women; on average, family size in such areas is smaller than on farms and households are generally better equipped with conveniences. Indeed, included in the rural non-farm sector, as defined in the 1961 Census, were a number of suburban fringe areas. Women in such areas would not only be subject to urban influences but many would have only recently moved from the city. However, the farm rates were raised by the inclusion of a substantial number of female unpaid family workers in agriculture. These women accounted for approximately 40 per cent of the female labour force resident in rural farm areas. The nature of their labour force attachment was qualitatively different from that of women gainfully employed outside the home. Further, and more important in the present context, the estimates of the female agricultural labour force derived by census enumeration may be subject to substantial response error, and there is reason to believe that these estimates were somewhat inflated in the 1961 Census count.¹ Unfortunately, it is not possible to ascertain with any degree of certainty whether or not the measurement error was sufficiently large to reverse the "true" relationship between rural farm and rural non-farm participation rates for women in 1961.

Finally, it should be noted that in Canada in 1961, as in the United States in 1950 (Chart 3B), the "two-phase" profile was evident in the urban and rural non farm groups but not in the farm population. The phenomenon of "re-entry" of middle-aged married women into the labour market is, in both its economic and sociological aspects, primarily an *urban* phenomenon and reflects urban influences in rural non-farm areas. Most of these women have found work in the commercial and service sector and opportunities for such work are limited in rural farm areas. Moreover, as has been pointed out earlier, attitudinal, demographic and cultural factors in farm areas mitigate against the labour force participation of married women. But it is of interest to observe that by 1960 in the United States even farm women were showing some tendency to enter (or re-enter) gainful employment in their middle and later years — a reflection, perhaps, of the growing "urbanization" of American farm communities.

Marital Status

In Chart 4A the participation profiles of women grouped according to marital status reveals the striking differences in the propensity to participate of women in each of the three categories. The effect of marriage was

¹ Cf. *Sylvia Ostry, The Occupational Composition of the Canadian Labour Force*, one of a series of Labour Force Studies in the Census Monograph Programme, (Ottawa: Queen's Printer, 1967), pp. 17-18, 29 and 44.

to reduce, in a most dramatic fashion, the tendency of women to enter the labour market. Over-all, the participation rate of married women was well below half that of single women and, at certain ages—the child bearing and child rearing ages—the gap was far greater. It is evident from this Chart that in 1961 in Canada the great majority of women who were married had eschewed any labour force attachment. They preferred to stay at home and were strongly bolstered in this preference by social mores and, in the case of those with children at home, by the current views of eminent authorities in the field of child care.¹ The deterrent effect of marriage on the labour force participation of women was, of course, not so great in 1961 as it was ten or twenty years ago. But that it was still extremely powerful is clearly seen by the profiles depicted in Chart 4A.

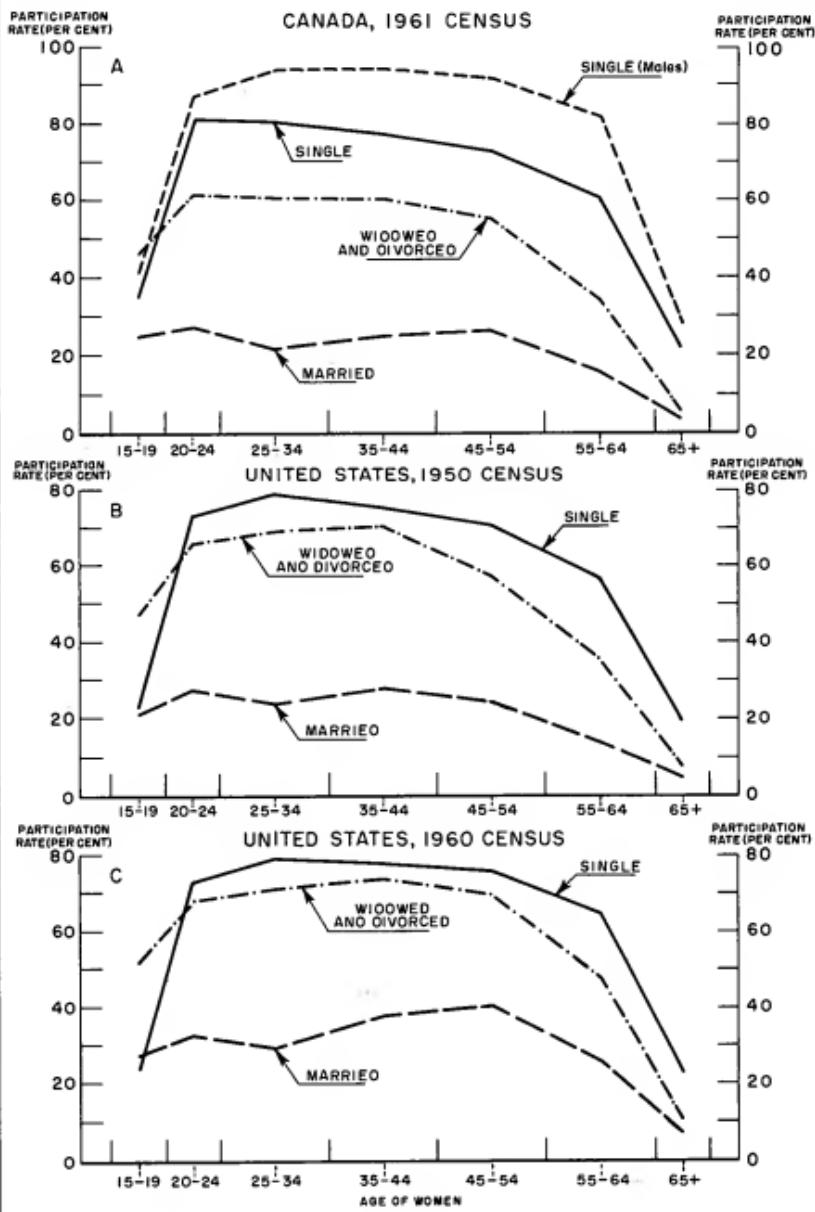
Chart 4A also reveals that the characteristic two-phase working life cycle observed in the profile of women as a whole was, as suggested earlier, entirely due to the re-entry into the labour market of middle-aged married women. The participation profile of the female population as a whole, in other words, derived its characteristic shape from the working life cycle of married women and more particularly, as will be seen, of married women with children. The participation profiles of single or widowed and divorced women were single-phased, reaching a peak at ages 20-24, and declining thereafter. For the latter group, the widowed and divorced, the activity rates were considerably lower at each age than they were for the spinsters but higher than for married women who had husbands to support them. The broken line in Chart 4A represents the participation profile of single men and it is evident that the labour force behaviour of spinsters closely resembled that of single men, sex being a far less important determinant of the labour market activity of the female population than was marital status.

Finally, the contrast between Canadian and American developments, noted above in connection with the profile for all women, is much more sharply exposed when the data are disaggregated by marital status. Charts 4B and 4C clearly illustrate the remarkable change which took place in the United States labour market over the decade of the 1950s, *viz.* the massive inflow of married women of all ages but particularly those between the ages of 35 and 55. The similarity between the Canadian situation in 1961 (Chart 4A) and that in the United States a decade earlier (Chart 4B) is, as has already been mentioned, unlikely to be repeated at the close of this present decade.

¹ Cf. Dr. Benjamin Spock, *Baby and Child Care*, Pocket Books of Canada edition, (Montreal, 1962), pp. 569-575.

CHART - 4

FEMALE PARTICIPATION PROFILE BY MARITAL STATUS,



Fertility and Stage of Family Formation

While marital status is clearly an important determinant of the labour force participation of women, marriage itself is, in fact, a lesser inhibitor of their labour force activity than is the presence of children in the home. This is observed from the profiles in Chart 5. The participation rates of married women (husband present) with no children of fifteen years or less living at home, were considerably higher than those of married women who had children in the home, although they were still not nearly as high as the activity rates of single women.¹ The contrast between the shapes of the profiles for "childless" married women (in the sense described here, i.e. with no children 15 years or under living at home) and those with children was most marked. The gap in rates was very large, initially, for women below the age of 25. For women with children, participation was very low during these years when their children were infants or pre-school toddlers. The gap was considerably narrowed, however, after the age of 35. The rates for "childless" women reached a peak for the cohort 25-34 years and thereafter declined sharply with increasing age. But the participation profile of women with children had the shape of a shallow, inverted "U": participation increased up to the age of 44, was almost stable until these women reached their mid-fifties and only declined after the age of 54. It is now apparent that the phenomenon referred to as "re-entry" of middle-aged married women into the labour market was not characteristic of all married women but only those with children at home. As will be suggested below, one important explanation for the re-entry is the reduction of the child-care activity of mothers as their children grow up and enter school. The social taboos against working mothers operate far less stringently as the children grow older and spend less time in the home and with the mother.² In other words, the labour force participation of married women is influenced not only by whether or not they have children at home but also by the ages of those children.³

¹ In husband-wife families with or without unmarried children. (See 1961 Census, Bulletin 2.1-11). It is interesting to note, however, that the participation rates of childless married women below the age of 25 is higher than that for single women of the same age. This may be a sign that in a good number of cases early marriage is made financially possible only if the wife is able to find gainful employment. Overall, however, the rate for married women without children under 15 living at home is only 27 per cent compared with almost 55 per cent for single women.

² It is not simply a question of social mores, powerful as these are in influencing the labour market decisions of married women. The price of child care services in the market is high and greatly diminishes the net return on the mother's gainful employment. The younger the child or children, the more extensive (and expensive) is the service required.

³ There is also evidence to suggest that participation is affected by the number of children at home. Thus the rates for women with one child 15 years or less at home were, at each age of mother, up to age 55, somewhat higher than were those for women with two or more children (cf. 1961 Census, Bulletin 2.1-11, Table 93). This may be related to the question of expense of purchased child care services which is probably greater, the larger the number of children, or to other factors associated with family size such as income, occupation of family head, educational level of wife, etc.

CHART-5

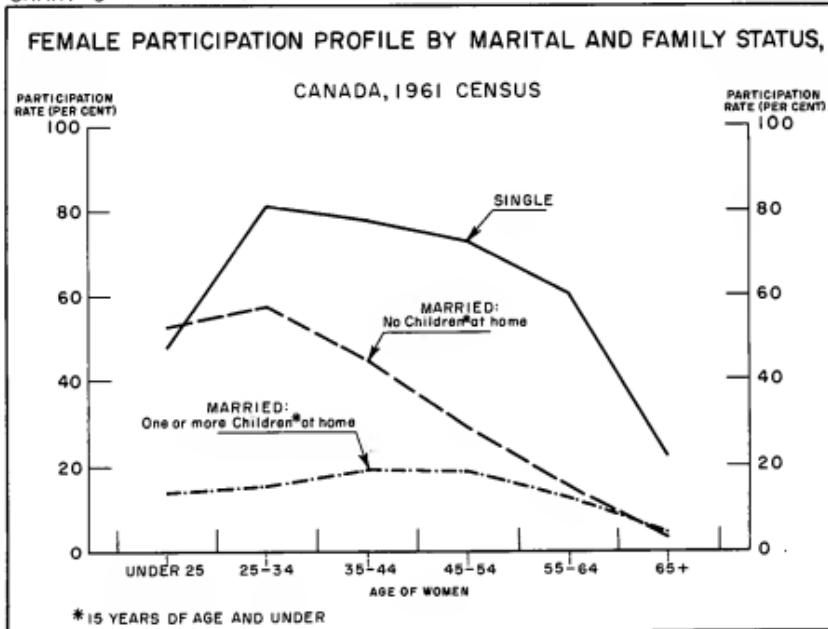
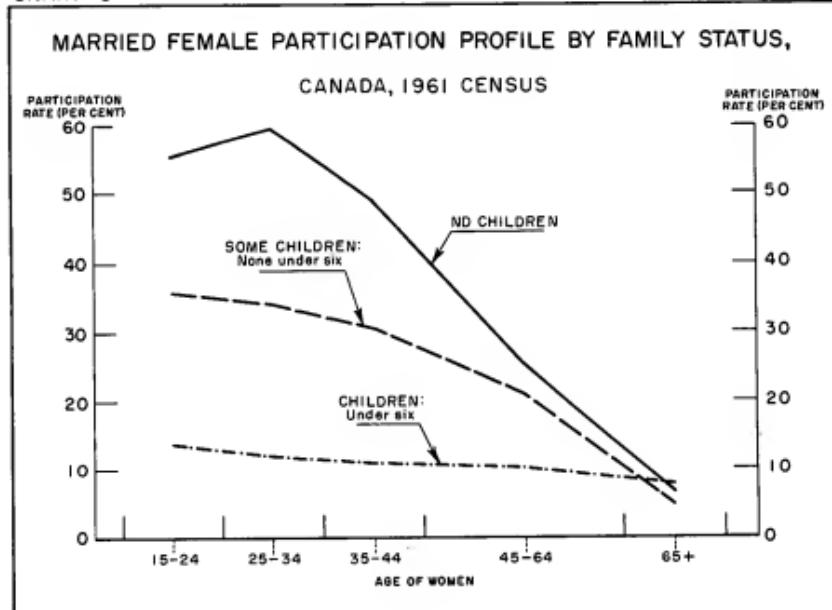


CHART-6



The effect of the ages of children living at home on the labour force behaviour of mothers is shown in Chart 6.¹ Once again, this Chart demonstrates that women without children² had a much greater propensity to enter the labour market, at every age, than did women with children (see Appendix). But it is also evident from Chart 6 that there was a marked difference between the labour force behaviour of women with and women without pre-school children. The rates for women with children under six were very much lower than for those women who had a family but no pre-schoolers to care for at home. Further, it will be noted that there was no evidence of "re-entry" of middle-aged women into the labour market in either profile. Clearly the two-phase participation profile observed for married women as a whole arose because of the changing "mix", for each succeeding cohort in the cross-section, of women with children of different ages. Up to the age of 34, women with young children predominated; after that, women with older children formed the majority and the effect of their higher participation rates was seen as the second "bulge" in the cross-section profile.

The "working life cycle" of women in Canada at the time of the 1961 Census was constructed from an analysis of cross-section profiles of participation. The "typical" woman married, worked for some time after marriage until she started a family, and dropped out of the labour market to care for her children until they entered school. Then some of these women (still a minority in 1961, but none the less growing in proportion in recent years) went back to work in middle-age, finding jobs in the expanding white-collar, sales and service sectors of the economy. It was this "second flow" of women into the labour market which was a new phenomenon in Canada: in 1951 it was not yet apparent. It was a major development of the 1950s, continuing, though more slowly, into the 1960s.

There is one other facet of the labour force activity of women as revealed in the 1961 Census which deserves mention before concluding this discussion of participation profiles. Most labour force analysis is couched in terms of current activity, i.e. the activity of the individual during a given week. For persons with a stable attachment to the labour force—most adult males, for example—this presents no problems. Although their employment status and industrial or occupational designation may change from time to time, such individuals will be in the labour force any week of

¹ Chart 6 is based on statistics collected from a 20-per cent sample of private non-farm households surveyed at the time of the 1961 Census. The sample questionnaire was concerned mainly with income and migration but special tabulations on husband-wife families, with husband in the labour force, were prepared for this monograph. These data are not directly comparable with the family data from the complete census count.

² In this case the census definition of a family "without children" means without unmarried children, of any age, living in the same dwelling as the parents.

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the year in which a survey is undertaken. A good many women, however, move into and out of the labour market over the course of a year or even shorter periods of time. Almost 250,000 women who worked at some time during the 12 months preceding the 1961 Census were no longer in the labour force at the time of the Census, i.e. the total number with some labour force attachment over the year (the "annual labour force") was in excess of the current labour force count. While a full-scale analysis of the annual labour force is beyond the scope of this study,¹ it is of some interest to point out the variation in the relationship between annual and current labour force within the female population. The annual working force data do not alter, in any fundamental respect, the picture of the working life cycle of women based on current participation rates. But they serve to demonstrate that these rates may somewhat underestimate the labour market activity of some groups of women. And they also serve to underline what was stressed at the outset of this discussion, that the working life of women is characterized by discontinuity and movement.

**Table 4 – Annual Labour Force^a as Percentage of Current Labour Force,
Women by Age and Marital Status: Canada, 1961**

Marital status	Age							
	15 and over	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Total	113.8	115.6	115.6	116.6	111.6	106.4	109.4	113.4
Single	107.3	115.4	104.9	103.1	102.4	102.6	104.1	108.6
Married	119.9	166.5	138.0	124.2	115.1	112.5	113.0	113.2
Widowed and divorced	108.2	110.2	109.8	107.2	106.1	106.1	109.1	113.3

^a Current labour force (as of June, 1961) plus those who had worked some time during the preceding 12 months.

SOURCE: Based on data from the 1961 Census.

From Table 4 it may be seen that the number of women who were in the labour market at some time between June 1960 and June 1961 was almost 14 per cent higher than those with a labour force attachment in the census reference week.² The comparable figure for males was less than

¹ For a more extensive analysis of this phenomenon see Dominion Bureau of Statistics, Special Labour Force Studies No. 2, *Annual Work Patterns of the Canadian Population: 1964*, by Frank J. Whittingham and Bruce W. Wilkinson, (Ottawa: Queen's Printer, 1967).

² This figure may be somewhat understated because of difficulties of enumerating the "marginal" elements in a census, as compared with some other type of household survey (cf. Frank T. Denton and Sylvia Ostry, *Historical Estimates....*, op. cit., and Sylvia Ostry, *Unemployment in Canada, another Study in this Census Monograph series*). Thus, the January 1965 Labour Force Survey of Annual Work Patterns revealed a 26-per cent excess of annual over current labour force for women. For men, the figure was 6 per cent—very close to the census figure. Possibly, in the case of women, there was some genuine increase in the "annual participation rate" between 1961 and 1964 but no doubt part of the difference between the two figures cited is a measurement phenomenon.

**Table 5 – Women in Annual Labour Force^a and Current Labour Force,
by Broad Occupational and Industry Group: Canada, 1961**

Occupation or industry	Annual labour force ^a	Current labour force	Annual as percent of current
Occupational group			
Managerial.....	60,973	57,661	105.7
Professional.....	299,245	272,333	109.9
Clerical.....	574,632	509,345	112.8
Sales.....	179,033	147,486	121.4
Craftsmen, etc.....	237,675	205,189	115.8
Labourers.....	25,717	20,943	122.8
Primary.....	83,495	76,281	109.5
Farmers and farm workers.....	82,854	75,868	109.2
Service and recreation.....	460,808	395,948	116.4
Transportation and communication.....	43,379	37,968	114.3
All occupations.....	2,010,647	1,766,332	113.8
Industry group			
Total primary.....	90,098	81,419	110.6
Agriculture.....	86,318	78,711	109.7
Manufacturing.....	345,710	301,991	114.5
Construction.....	12,384	10,776	114.9
Transportation, communications and other utilities.....	92,225	83,094	114.6
Trade.....	354,928	301,462	117.7
Community, business and personal services.....	850,494	749,445	113.5
Total, personal services.....	322,136	274,584	117.3
Hotels, restaurants, and taverns.....	130,082	106,125	122.6
Public administration and defence.....	96,150	86,686	110.9
All industries.....	2,010,647	1,766,332	112.8

^a Current labour force (as of June, 1961) plus those who had worked some time during the preceding 12 months.

SOURCE: Based on data from the 1961 Census.

5 per cent, indicating that women were much more likely to move into and out of the labour during the year or, to put it another way, that the female labour force was much more "mobile" than was the male.

The least mobile group of women, in this sense of movement to and from the labour market, was that of adult single women whose labour force behaviour, as already noted, was very similar to that of single men. Single teen-agers, however, showed an excess of annual over current labour force well above the average for single women as a whole. Many of these youngsters would have been attending school in June but probably had worked during Christmas holidays or at other times during the year. In general, the excess of annual over current labour force was greatest for married women.

It reached enormous proportions for married teen-agers (over 66 per cent) and was very substantial for young women between the ages of 20 and 34. Unfortunately, there was no direct information on the nature or extent of the work these women did during the year although some indirect evidence on the occupational and industrial composition of the annual work force is presented below.

From Table 5 it may be seen that, on an occupation basis, sales and service occupations provided a good number of jobs for this "mobile" group of women who worked intermittently or at a particular season of the year. The percentage excess of annual over current labour force in sales occupations was in the order of one-fifth and represented over 30,000 women: in service occupations the excess was about 16 per cent but the number was larger, almost 65,000 women. Another large group of women, who were no longer in the labour force at the time of the 1961 Census, had worked at clerical jobs during the year. On an industry basis, roughly the same picture emerges: the industry groups with the most "elastic" female work force were the trade and service, especially personal service, industries.

3. *Other Influences Affecting the Labour Force Participation of Married Women*

The analysis thus far of cohort and cross-section participation profiles has stressed the importance of certain demographic factors such as age, residence, marital status, fertility, stage of family formation, in influencing the labour market activity of women. Indeed, these factors are of great importance in explaining, at any given time, a large portion of the variation in labour force behaviour within the female population. But other influences of a social and economic nature are also at work. This is clearly seen when labour force trends are examined over long periods of time—as witness the marked increase in participation of married women and women with children over the past few decades. But cross-section study also reveals the effects of some of these non-demographic factors on the labour force behaviour of married women (see also Appendix).

INCOME OF HUSBAND

One of the pioneering works in the field of labour force behaviour was that of Paul Douglas¹ who found an inverse relation between the wages of adult males and labour force participation rates of females by city in cross-section studies for 1920 and 1930. Since Douglas' early work a good deal of empirical evidence has been accumulated suggesting that, at a given time, the "supply curve" of labour of married women is backward bending, i.e. the more her husband earns, the less likely is a married woman to work outside the home.² Does this relationship hold true in Canada? A tentative

¹ Paul H. Douglas, *The Theory of Wages*, (New York: 1934). Cf. also Clarence D. Long, *The Labour Force under Changing Income and Employment*, (Princeton: 1958), especially Chapter 4. Long repeated Douglas' work for 1900, 1940 and 1950. The Douglas findings were confirmed for 1900 and 1940 but not for 1950. Long found further cross-section evidence of inverse association between income and participation for states in the United States and a group of countries at selected points in time.

² For a review of the empirical evidence in this area and further extension of the cross-section analysis see Jacob Mincer, *op. cit.* Mincer's model seeks to explain the "confusion" of evidence (concerning the relation of labour force participation and income) between cross-section and over time studies. Cf. also comment by Clarence Long in same volume. See also Mincer's later article "Labor Force Participation and Unemployment" in *Prosperity and Unemployment*, edited by R.A. Gordon and Margaret S. Gordon, (New York: 1966), and Glen G. Gail, *Married Women in the Labor Force*, (Chicago: 1966), with bibliography cited therein.

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and qualified affirmative answer is provided by the data in Table 6.¹ (The regression results presented in the Appendix are also of relevance in this respect).

Table 6 - Labour Force Participation Rates of Married Women,^a
15-64 Years, by Age of Wife, by Presence and Age of Children,
by Income of Husband: Canada, 1961

NOTE. - Where cell is left blank, data provided less than 50 observations.

Age of wife and family type	Income of husband				
	Under \$2,999	\$3,000 - \$4,999	\$5,000 - \$6,999	\$7,000 - \$9,999	\$10,000 and over
15-24 years					
One or more children under 6..	15.2	14.1	9.7	6.4	-
Some children, none under 6..	-	40.1	-	-	-
No children	49.3	58.8	59.1	51.6	42.8
25-34 years					
One or more children under 6..	16.0	13.7	9.5	5.4	5.0
Some children, none under 6..	39.2	37.8	29.8	18.5	15.2
No children	57.5	61.0	62.5	51.7	36.9
35-44 years					
One or more children under 6..	14.8	12.4	9.3	6.0	5.2
Some children, none under 6..	37.2	35.1	29.3	19.4	11.1
No children	50.3	50.9	49.5	40.7	27.4
45-64 years					
One or more children under 6..	13.5	10.0	8.5	6.9	4.9
Some children, none under 6..	24.0	22.8	21.1	17.1	9.1
No children	29.5	27.3	23.3	17.0	11.7

^a In husband-wife families, living in urban and rural non-farm areas, husband in labour force.

SOURCE: Based on data from population sample, 1961 Census.

As has been seen, the demographic variables such as a woman's age and the age of her children, if any, affect the labour force behaviour of married women. Thus, in order to discern more clearly the relationship between the labour force participation of women and their husband's income,

¹ A firmer affirmative answer is provided by the results of multiple regression analysis on both 1961 Census data and sample survey data from the 1963 Survey of Consumer Finance. Thus, for example, in 14 different equations run on 174 observations (municipalities of 10,000 population and over in 1961), with participation rate of wife as the dependent variable and husband's income plus selected social, economic and demographic independent variables, the sign of the regression coefficient for husband's income was invariably negative and the coefficients were all significant. With regressions run on the Survey of Consumer Finance sample data, the coefficients were consistently negative but significant in only two out of four cases. A detailed account of these results (including, of course, the specifications of the equations, the data, etc.) will be presented in forthcoming D.B.S. publications on this subject.

it is useful to group the sample of married women into sub-categories according to their age and family type as in Table 6. By reading across the rows within each sub-group one can "hold constant" the demographic variables of age and family composition and examine the effects of income on female participation as summarized in these average rates. By looking down the columns, within each age sub-category, the effects of family type — with income held constant — are demonstrated.

It is immediately apparent from Table 6 that the influence of family composition on the labour force behaviour of women was much more powerful than any "income effect". Within each age group the differences in participation among women of different family types were far greater than those associated with income in a given family type. It is of interest to note, however, that the influence of family composition on participation appeared to be weaker among women of 45-64 than for younger women. (This is clearly brought out also in Appendix Table A.3). There was very little difference between the rates of older women without pre-school children and those without any children at all. One plausible explanation for this phenomenon is that most of the children of women in this age group were likely to be teen-agers who did not require as much attention from their mothers as did the younger children of younger mothers. Teen-agers are also, to some degree, "mother substitutes" in families which have smaller children as well. In both instances the burden of child care, and its inhibitory effects on women's participation in the labour market, are reduced.

As for the relationship between husband's income and labour force rates of wives, Table 6 demonstrates that for most of the age-family type categories the association was negative: the lower the husbands' income, the higher the frequency of labour force membership of wives. In general, however, (see Table 7) the "elasticity" of the supply curve of labour of these married women, i.e., the percentage decline in participation associated with a given percentage increase in income, appeared to be somewhat higher at the middle and higher levels of income.¹ Indeed, for three groups of women without children, those 15-24, 25-34 and 35-44 years of age, the elasticity was positive at the lower income end of the distribution, i.e. participation rose (but at a declining rate) as incomes rose and only at incomes above \$6,000 or so did the negative relationship appear. (See also Table A.4; in the Appendix which locates the income "threshold" at \$5,000-\$7,000.)

¹ Cf. Long, *op. cit.*, pp. 82 and 88, who reports the same finding for the U.S. in 1940 and 1956: "...the higher the income level, the more women (percentagewise) dropped out with additional prosperity".

Table 7 – Estimated Percentage Change in Participation Rate of Married Women Associated with One Percent of Additional Income of Husbands: Canada, 1961

NOTE.— Average income at upper and lower end of distribution estimated on basis of information from detailed distributions for entire sample.

Age of wife and family type	Income level of husband			
	\$2,000 to \$4,000	\$4,000 to \$6,000	\$6,000 to \$8,500	\$8,500 to \$17,000
15-24 years	%	%	%	%
One or more children under 6	-.07	-.62	-.82	—
Some children, none under 6	—	—	—	—
No children .....	.12	.01	.31	-.17
25-34 years				
One or more children under 6	-.14	-.61	-.1.04	-.07
Some children, none under 6	-.04	-.42	-.91	-.18
No children .....	.06	.05	-.37	-.28
35-44 years				
One or more children under 6	-.17	-.50	-.85	-.13
Some children, none under 6	-.16	-.33	-.81	-.43
No children .....	.01	.06	-.43	-.33
45-64 years				
One or more children under 6	-.26	-.30	-.45	-.28
Some children, none under 6	-.05	-.15	-.43	-.47
No children	-.08	-.39	-.65	-.31

SOURCE: Table 6.

Further in this vein, Table 7 suggests that the negative labour force response of women with children and especially women with pre-schoolers was generally stronger than that of childless women. (See also Appendix, Chart A-1.) Thus, at least for women between the ages of 25 and 44, the decline in participation as their husbands' incomes rose appeared to be more marked (except at the very highest levels of income) when children were present in the family. This finding suggests that the motives for labour force participation of women with children and childless women may be at least to some degree, dissimilar. Women with children, especially young children, appeared more likely to leave their jobs and return to their housekeeping and child care duties as soon as their husbands' earnings made such a choice feasible,¹ suggesting that the prime motivation for

¹ Economic pressures would not be relevant at very high income levels and, as noted, the differential response was not evident at incomes over \$8,500. These are very broad income categories, of course, and can yield only very crude estimates of elasticity. But these findings are very similar to those described by Long, *op. cit.*, Chapter 5. In particular, cf. the data in his Table 9, pp. 83-87. See, however, the findings of the regression analysis shown in the Appendix in respect to the response of women of differing educational levels (Table A.4).

working was economic whereas childless women may have been more influenced by other considerations, as well as the economic, in seeking jobs outside the home.

Finally, it is again of interest to note that the differential response, as between women with children and childless women, was not evident in the case of older women between 45 and 64 years. (See Appendix, Table A.3). The explanation cited above, in connection with these women, that most of their children were likely to be teen-agers and therefore less dependent on mother's care at home, may be relevant here as well. But clearly, much more detailed information on family composition as well as on other characteristics is required to explain the labour force response of this group.

In summary, judging from the average rates presented in Table 6, rates which, of course, conceal a good deal of variation within each stratum of the sample, the labour force participation of married women in Canada in 1961 appeared to be negatively associated with the level of their husbands' income. But the negative association was not invariable. In more general terms, the strength and direction of the response of labour force rates to additional income was apparently influenced by demographic characteristics, in particular age of wife and family composition, as well as by the level of income itself.¹

EDUCATION OF WIFE

It has been repeatedly observed in the United States that the labour force participation of women is positively associated with their level of education.² As will be seen, the same is true of Canada. Part of the explanation lies in the different marital and fertility characteristics of more educated women. The more educated a woman, the later she is likely to marry.³ In Table 8 it may be seen that the average age of marriage rises consistently with increasing education.⁴ Further, the more educated a woman, the more likely she is to have fewer children or to be childless.

¹ This is evident in the regression results shown in the Appendix (which also suggest that the "income effect" differs according to the education level of wives—see Table A.4) and also in regressions run on Census data for metropolitan areas. In the latter study, using age specific participation rates of women as the dependent variable, the coefficients for husbands' income were more often negative for younger than for older women.

² See Gertrude Bancroft, *The American Labor Force*, A Volume in the Census Monograph Series, (New York: 1958), pp. 65-69; Long, *op. cit.*, pp. 94-96; National Manpower Council, *Womanpower*, (New York: 1957), pp. 74-77.

³ Also the less likely she is to marry at all. The proportion of single women, among women with a university degree, was higher than for women with less education.

⁴ This pattern was less marked for the younger women than for those in the two older age groups suggesting that perhaps these marriage habits are changing or perhaps more of the university educated women aged 25-29 in 1961 had yet to marry.

Table 8 - Average Age at Marriage of Ever-Married Women
by Age and Schooling: Canada, 1961

Age of wife	Schooling			
	Elementary or less	Secondary	Some university	University degree
25-29 years	20.15 years	20.65 years	22.10 years	22.97 years
35-39 "	21.79 "	22.56 "	23.96 "	25.26 "
45-49 "	23.17 "	24.61 "	26.27 "	27.23 "

SOURCE: Based on data from population sample, 1961 Census.

These differential fertility patterns are strikingly apparent in Table 9. For each age category of wives the fertility rate declined with higher education and the percentage of childless women increased. It should also be noted that more educated women tended to postpone having children for a longer period after marriage than did women with less schooling. Thus, in the age group 20-24, over half of the wives with a university degree were childless, compared with around 20 per cent for those without high school and just over one-quarter with high school education. But the differentials (by level of education) in the proportion of childless women diminished after the age of 25.¹

These differences in behaviour in respect to marriage and child-bearing were not the only factors accounting for the strong positive association between female labour force activity and education. It is generally true, for example, that more interesting, pleasant and remunerative work is available the more education a person has. The higher the level of education, therefore, the greater the "pull" into the labour market. Then too there may be a "push" element operating in the case of married women in that the more educated a woman, particularly if she has a university degree, the less satisfied she is likely to be with housework as a full-time occupation. But whatever the reasons for the association (and without much more intensive and sophisticated analysis one can do little more than speculate on them) there is no doubt, as the data described below reveal,

¹ The fact that the age at marriage is related to the level of education (Table 8) must be kept in mind when interpreting Table 9. But the differentials, by education, in the percentage of childless women within the 20-24 year group were so large that the statement made in the text concerning postponement of first birth is probably true. Cf. Jacques Henripin, *Tendances et facteurs de la fécondité au Canada, 1961* Census Monograph (Ottawa: Queen's Printer, 1968) Table 5.1 which also shows the same pattern of negative association between fertility and the education of the wife when both the age at marriage and duration of marriage were taken into account.

as to the strength and consistency of the relationship between a woman's education and her labour market activity.

Table 9 - Fertility Rates^a and Percentage Childless Women,
by Age and Schooling: Canada, 1961

Age of wife	Schooling			
	Elementary or less	Secondary	Some university	University degree
15-19				
Fertility rate	840	693	233	—
Percentage childless	37.78	44.02	79.09	100.00
20-24				
Fertility rate	1576	1266	776	553
Percentage childless	19.63	27.73	45.23	56.73
25-29				
Fertility rate	2527	2066	1606	1326
Percentage childless	10.25	14.32	22.39	28.57
30-34				
Fertility rate	3207	2572	2260	2157
Percentage childless	7.91	10.30	13.72	14.89
35-39				
Fertility rate	3678	2777	2548	2498
Percentage childless	7.85	9.74	11.47	13.06
40-44				
Fertility rate	3962	2785	2523	2506
Percentage childless	8.78	11.18	13.35	13.75
45-49				
Fertility rate	3844	2594	2268	2163
Percentage childless	11.08	14.50	15.97	17.72
50-54				
Fertility rate	3859	2519	2046	1942
Percentage childless	12.52	17.62	20.69	21.51
55-59				
Fertility rate	3985	2260	2064	1795
Percentage childless	12.72	18.66	22.26	26.72
60-64				
Fertility rate	4255	2831	2219	1887
Percentage childless	11.99	17.92	20.16	26.19
65 and over				
Fertility rate	4545	3106	2381	2337
Percentage childless	10.93	16.23	19.94	20.40

^a Number of children born per thousand women ever married.

SOURCE: Based on data from population sample, 1961 Census.

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Before examining the influence of education on the participation of married women, it is of some interest to review the general picture for women as a whole. From Table 10 it is apparent that for each age group, the higher the level of education the higher the participation rate of women. Indeed, it is clear that education exerted a more powerful influence than did age in determining whether or not a woman entered the labour force.¹ At any given age the difference in the participation of women who had not completed elementary school and those who had finished university was much greater than any difference associated with age alone. (This is more clearly brought out by the regression results shown in the Appendix.)

Table 10 - Labour Force Participation Rates of Women,
20-64 Years of Age, by Age and Schooling:
Canada, 1961

Age of wife	Schooling					
	Elementary		Secondary		University	
	Less than 5	5 and over	1-3	4-5	Some	Degree
15 years and over	14.3	23.1	31.0	40.6	47.3	47.9
20-24	25.1	35.9	45.9	64.5	65.0	64.3
25-34	19.9	23.0	29.1	36.9	44.4	43.9
35-44	18.2	26.0	32.4	37.6	44.0	44.6
45-54	20.3	27.7	35.5	43.6	52.7	55.7
55-64	15.0	20.8	27.6	34.4	43.0	50.6

SOURCE: Based on data from 1961 Census.

It may be observed from Table 10 that the pattern of response of labour force participation to increasing education varied somewhat for women of different ages. For young women between the ages of 20 and 24, the increase in activity rates associated with improvements in education was very strong at the lower levels of schooling and there is a big "jump" (an increase of 40 per cent) as schooling was extended into the senior years of high school. There was, however, scarcely any difference between the participation rate of those women who had completed high school and those who went on to or completed university.² For older women, especially those over 45, extension of schooling through high school and to university was associated with very substantial increases in participation.

¹ Cf. Allingham, *Study No. 5*, *op. cit.*, pp. 21-22. For more recent data on education and participation of women see Dominion Bureau of Statistics, *Special Labour Force Studies No. 1, Educational Attainment of the Canadian Population and Labour Force, 1960-65*, by Frank J. Whittingham, (Ottawa: Queen's Printer, 1966).

² The picture for this group is complicated by the fact that some of these women may have reported they were attending university in June when the census was taken.

Table 11 - Labour Force Participation Rates of Married Women
by Family Type and Schooling: Canada, 1961

Family type	Schooling		
	Elementary or less	Secondary	University
Total	17.5	25.0	36.2
One or more children under 6	9.7	12.8	15.3
Some children, none under 6	20.8	29.8	33.3
No children	26.1	44.0	51.4

SOURCE: Based on data from the population sample, 1961 Census.

The relationship observed for the female population as a whole—more education, more participation—was also characteristic of married women whether or not they had children and whatever the age of their children. This may be seen in Table 11 based on data from the population sample. For each of the three family types participation rose markedly and consistently with improvement in education. The association is thus a most powerful one: the better-educated married woman, no matter what her family status, is more likely to work outside the home. As has been suggested, an important reason for this is undoubtedly that a wife's earning power is closely linked to her educational level, i.e. her labour force activity is positively related to her income opportunities. How is this relationship affected by her husband's income level? In Table 12 below, data are provided which throw some light on this.

In general, except at the highest income level, the increase in participation of wives associated with higher levels of education was stronger when their husband's income is held constant than when it is not.¹ The differences in activity rates observed in reading down columns (1) to (3) were greater than those in the outside column summarizing the relationship. At high levels of husband's income, however, the association between wife's participation and her education (reflecting her earning power) was weaker and, in some cases not evident. It would appear that the "pull" of the market exerted by good earning opportunities for women was weakened or even nullified when their husbands' earning ability was very high. This was most evident in families with young children: as may be seen, the positive income effect on mothers with pre-school children was very weak when their husbands earned over \$7,000. The reasons for this, stemming from child care responsibilities in families of this type, have already been discussed.

¹ Cf. Mincer, *Aspects of Labor Economics*, op. cit., p. 87 and Table 7, p. 88.

Table 12 - Labour Force Participation Rates of Married Women,^a by Schooling and Family Type, by Income of Husband: Canada, 1961

Schooling of wife and family type	Income of Husband					
	(1) Under \$3,000	(2) \$3,000 - \$4,999	(3) \$5,000 - \$6,999	(4) \$7,000 - \$9,999	(5) \$10,000 and over	(6) Total
Total.....	26.0	24.9	20.2	14.2	9.4	22.4
One or more children under 6						
Elementary or less	12.0	9.7	6.2	5.2	6.2	9.7
High School	19.0	15.3	10.0	5.2	4.5	12.8
University	36.2	24.5	15.7	8.8	6.6	15.3
Some children, none under 6						
Elementary or less	23.5	21.8	17.1	12.4	10.6	20.8
High School	38.6	36.4	28.7	18.1	9.7	29.8
University	56.1	53.7	44.2	29.0	11.4	33.3
No children						
Elementary or less	28.1	27.0	21.3	14.2	15.6	26.1
High School	46.9	49.9	42.4	27.9	14.1	44.0
University	60.2	63.0	57.3	40.6	20.5	51.4
Average income of women^b by schooling		Participation of married women by schooling				
Elementary or less	\$1,236				17.5	
High School	\$1,764				25.0	
University	\$2,840				36.2	

^a In husband-wife families, living in urban and rural non-farm areas, husband in labour force. ^b Non-farm income of women in urban and rural non-farm areas.

SOURCE: Based on data from population sample, 1961 Census.

Assuming that education of wife is a reasonable "proxy" for earning power, the effect of higher wages in pulling married women into the market appears to be stronger than the negative effect, discouraging participation, of husband's income. (See Appendix Charts A-1 and A-2). While data were not provided on the actual average earnings of the sample of wives, a rough estimate of the relative strength of the "positive" and "negative" income effects can be obtained by substituting average income of all women by educational level—reflecting earning opportunities for married women with a given amount of schooling. These data appear at the bottom of Table 12 along with the overall labour force rates of married women in the three schooling groups. As measured by these averages, the positive elasticity, i.e., the percentage increase in the labour force rate associated with a

1-per cent rise in female earnings, was between .75 and 1.00. The negative elasticity, in response to increasing income of husbands, ranged from -.04 to -.71, considerably weaker. Jacob Mincer, in an American study, found that the wives' positive elasticity with respect to own earnings was "about double" their negative elasticity with respect to husbands' income.¹

HUSBAND'S EMPLOYMENT STATUS, WORK EXPERIENCE AND OCCUPATION

Whether a woman works or not is influenced, as we have seen, by her age, her marital status, whether or not she has children, the age of those children as well as by economic and social factors such as her husband's income and her own education and earning power. There is also limited evidence available from the 1961 Census to suggest that if her husband was unemployed she was more likely to be in the labour force than if he had a job, although the relationship between husbands' employment status and wives' activity did not appear to be very strong. Thus the participation rate of married women, whose husbands were employed at the time of the 1961 Census, was 22 per cent whereas the rate for those with unemployed husbands was 26 per cent.² Further, a husband's experience of broken employment over the year evidently stimulated his wife's labour market participation, although again the influence appears rather weak. The activity rate for women whose husbands were employed for only half a year or less was 24 per cent whereas those with husbands who worked full-time or close to full-time in 1960 had membership rates of 22 per cent.³

The data in Table 13 suggest that there may be some variation in participation rates of married women depending on their husbands' occupation. This may simply be due to income differences among occupations but it may also reflect differing social values and attitudes as well. A woman was least likely to be in the labour force if her husband was a

¹ Cf. *Ibid*, p. 78.

² This use of two-way classifications of data to probe complex relationships is, of course, merely suggestive. Thus the observed difference in the participation rate of wives in families with employed and unemployed heads may have been entirely attributable to the combined influence of a number of factors which were themselves associated with the employment status of the family head. However, some American studies do suggest an independent influence of husbands' employment status: cf. Long, *op. cit.*, p. 63 and Mincer *Aspects*, *op. cit.*, p. 78 and p. 90. For Canada, multiple regression analysis of data from the 1963 Survey of Consumer Finance revealed a weak positive association between wives' participation and husbands' current unemployment status after accounting for a number of other factors, both demographic and economic. Similar results were obtained from census data for metropolitan areas.

³ These data relate to the work experience of wage earner husbands and the relevant census question was: "In how many weeks does (he) work for wages and salaries?" The term "employed" therefore should not be interpreted as full time work: an individual working even an hour a week in 52 weeks would have been classified as working a full year.

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professional or a manager—the two occupations with the highest average incomes and the highest status in the community. But this association, high income, high status and low participation, was not consistent. For example, the wives of craftsmen and semi-skilled production workers, a manual group, had a much lower participation rate than did wives of clerical workers, a white collar occupation with a higher average income.¹ The wives of sales or service workers also had relatively high activity rates, certainly higher on average than those of women married to unskilled labourers, a low-income low-status occupation.

Table 13 – Labour Force Participation Rates of Married Women by Selected Occupation Group of Husband, All Wives and Wives under 25 Years of Age: Average Income of Males by Selected Occupation: Canada, 1961

Occupation group of husband	Participation rate of wives		Average income ^a of males
	Total	Under 25	
Managerial	20.9	27.3	7,435
Professional	20.7	35.6	7,062
Clerical	29.7	38.4	4,446
Craftsmen and kindred workers.....	22.4	26.2	3,967
Transportation and communication...	22.3	23.1	3,900
Sales	25.5	33.0	3,721
Service and recreation	24.9	24.7	3,574
Labourers	22.4	23.7	2,508

^a Non-farm income.

SOURCE: Based on data from 1961 Census and from population sample of the Census.

One further point deserving comment emerges from the data presented in Table 13. When one looks at the activity rates of young wives (under 25) a different pattern emerges. Instead of having the lowest participation, the wives of professionals, and, to a lesser extent, managers, showed a relatively high propensity to participate (ranking, respectively second and fourth instead of seventh and eighth as they did among the rates shown for all wives). Possibly differences in fertility patterns may have been a factor here, the wives of husbands in professional and managerial occupations were probably more educated and were likely to have had their first child rather later than did less educated women. But another influence may have

¹ It is possible that the participation rate of wives was directly influenced by their own occupations. There was some relationship—although a weak one—between the occupations of wives and husbands. For example, a somewhat higher-than-average proportion of wives with husbands in clerical occupations were themselves in clerical occupations. But, the highest proportion of wives in clerical occupations were those whose husbands work in service jobs. And an almost identical proportion of wives of professionals or salesmen were also in clerical jobs.

been of some significance as well. Mincer has found that married women are more likely to have a labour force attachment if their husbands' current earnings are below their "permanent" income and, that the wives' response to transitory income is very strong. Young men in professional and managerial occupations will not have attained their full potential income—their permanent income. Thus, the negative transitory income may act as a stimulant to their wives' labour force participation. Such negative transitory elements would be far less important in other occupations which require less education and offer less scope for financial improvement over the course of a life's work.

This completes the discussion of the participation of married women in Canada except for the regression analysis presented in the Appendix. The concluding section of this Study deals with an exposition of male-female earning differences. Before turning to that topic, however, it is of some interest to describe, albeit briefly, some of the financial impact on the family of this labour market activity of married women.

FINANCIAL CONTRIBUTION OF WORKING WIVES

As mentioned earlier, in June 1961 just over 22 per cent of all married women in Canada were in the labour force. During the course of the preceding year, an additional 177,000 had had some work experience, so that the "annual" participation rate reached 26.5 per cent. What was the financial effect of all this working activity of married women?¹

Table 14 – Median Earnings of Wives by Earnings of Husbands^a:
Canada, 1961

Earnings of husband	Median earnings of wife
Under \$1,000	\$ 1,350
\$ 1,000-\$1,999.....	1,444
\$ 2,000-\$2,999.....	1,655
\$ 3,000-\$3,999.....	1,974
\$ 4,000-\$4,999.....	2,164
\$ 5,000-\$5,999.....	2,252
\$ 6,000-\$6,999.....	2,339
\$ 7,000-\$9,999.....	2,472
\$10,000 and over.....	2,762

^a In husband-wife families in which both husband and wife are wage-earners.

SOURCE: Based on data from 1961 Census.

In Table 14 the median earnings of wives are presented in conjunction with their husbands' earnings level. These data relate only to husband-wife

¹ A much fuller treatment of this question will be found in the Census Monograph, *Incomes of Canadians*, by J.R. Podoluk (Ottawa: Queen's Printer, 1968).

Table 15 - Average Earnings of Husband, Average Family Earnings,^a by Labour Force Status and Age of Wife: Canada, 1961

Age of wife	Wife not in labour force			Wife in labour force			Relative family earnings
	(1) Average earnings of husband	(2) Average family earnings	(2) as % of (1)	(3) Average earnings of husband	(4) Average family earnings	(4) as % of (3)	
	\$	\$		\$	\$		
All families	4,510	4,790	106.2	3,868	5,873	151.8	122.6
Under 25 years..	3,592	3,813	106.2	3,393	5,259	155.0	137.9
25-34	4,655	4,752	102.1	3,967	5,790	146.0	121.8
35-44	5,011	5,261	105.0	4,082	6,053	148.3	115.0
45-54	4,672	5,389	115.3	3,963	6,425	162.1	119.2
55-64	3,940	4,538	115.2	3,304	5,479	165.8	120.7

^a Husband-wife families with wage-earner husbands.

SOURCE: Based on data from 1961 Census.

families in which both are wage-earners. It may be seen that at very low levels of husbands' earnings, wives made a very important contribution to the family's financial status, earning on average as much as or even more than their spouses. Indeed, the wife's contribution was substantial—equal to half or more of her husband's earnings until they reached about \$5,000. At higher levels of male earnings, however, the contribution of a working wife, though increasing absolutely, dwindled markedly as a proportion of her husband's earnings and, therefore, presumably of total family income. Further indication of the effect of working wives on the family financial position is seen in Table 15 (again relating only to husband-wife families in which both were wage-earners). Average family earnings in families with participating wives were 50 per cent higher than the average earnings of the husband. In families with non-working wives the excess was about 6 per cent.¹ The gap in family income, between the two types of families, was about 23 per cent, i.e., the average income of those wage earner families with the wife in the labour force was well over one-fifth higher than similar families without working wives.² It should be noted that the average earnings of husbands were lower, over-all and at each age of wife, in families in which the wife was not in the labour force, suggesting again the

¹ This small excess could have been due either to earnings of the wife from a short period of employment during the preceding year (her labour force status, in Table 15, refers to the enumeration week in June) or to earnings of other family members.

² It cannot be assumed that the difference was entirely due to the wife's employment. Other family members may also have contributed—in both types of families—and wives, no longer in the June labour force, may have contributed to family earnings during the year.

negative relationship between wives' labour market activity and husbands' income described above.

It appears from Table 15 that working wives made a relatively greater contribution to family earnings in very young families,¹ when the husband was getting started in his work and had not yet reached the peak of his earning ability, and again in late middle-age, when the husband's earning power was beginning to decline. Thus the difference between average family earnings of families with and without working wives was highest when the wife was under 25, declined up to age 44, and then rose again in later years. Similarly, the excess of average family earnings over average earnings of husbands with working wives, was over 50 per cent in the youngest age group, declined for women between the ages of 25 and 44, and then rose to above 60 per cent for older women.

In summary, then, these 1961 Census data suggest that the working wife made a fairly substantial contribution to her family's economic well-being. On average, family income was raised around 50 per cent above the husband's income—largely through the contribution of the wife. Further, the family with a wife in the paid labour force enjoyed an income something over 1/5 higher than families with wives who were not working outside the home.

¹ On the assumption that the age of husband and wife is usually located within the same ten-year category.

4. *Earnings Differences between Men and Women*

The preceding analysis has shown that in recent years women have been going out to work in increasing numbers—not just single or childless women, but married women with family responsibilities. In the community at large there is growing, but by no means universal, acceptance of this phenomenon. In the past this was, of course, decidedly not the case. Apart from the teaching and nursing professions, which have always provided acceptable employment for respectable spinsters, the female worker, forced into the labour market by sheer economic necessity, was confined to the lowest paid, most menial job in the service or manual occupations.¹ The question of equal pay for men and women scarcely arose, since women were so concentrated in "feminine" occupations. Convention, in some instances probably reinforced by supply and demand, determined that female work and low pay were synonymous.

Despite the remarkable changes which have occurred over the course of this century, both in the extent of female participation in the labour market and in the range of jobs open to women workers, in both 1951 and 1961 the average earnings of female workers were scarcely better than half those of males.²

The figure just quoted—a female-male average earnings ratio of just over 50 per cent—is a startling one. What portion of it represented the effects of impersonal, and therefore "rational" market forces? How significant was the effect of irrational prejudice? What weight should be assigned to the persistence of customary habits of thought and action left over from an earlier day far different from the present? With our present state of knowledge these questions are impossible to answer. It is easier to tackle a less complicated, but directly relevant, query: "What, in 1961, were the pay differences between men and women for comparable work performed?"

¹ See Sylvia Ostry, *The Occupational Composition*, op. cit.

² In 1951 only median earnings were available. The ratio of median wages and salaries of female wage earners to male median earnings was 55.2 per cent. A comparable ratio in 1961 was 54.9 per cent. For 1961, the ratio based on mean earnings was 54.3 per cent. From these data one might conclude that the "sex differential" was unchanged over the decade, but an examination of more detailed occupational information for the two census years suggests that the gap between male and female earnings may have widened between 1951 and 1961. However, the data are too fragmentary to sustain any intensive analysis and a study of trends must await further developmental work in the construction of historical series.

To this simple (and perhaps less interesting) question some partial and very approximate answers may be provided and that is the task of this concluding section.

THE SEX RATIO IN AVERAGE ANNUAL EARNINGS

For convenience of presentation, the ratio of female to male earnings will be referred to as a "sex ratio" although it must be stressed from the outset that the use of this term in no way implies that sex alone, in the sense of pay differences between men and women for comparable work performed, accounted for the differences observed in the summary percentages to be cited. Even if men and women were paid identically for work performed, sex differences in average earnings such as those cited could arise from a variety of factors. It is useful to group these, for analytical purposes, into two main categories: *distributional*, due to the differing occupational¹ deployment of the male and female labour force, and *qualitative*, a portmanteau term covering many items such as education, training, work experience, extent of absenteeism, turnover, etc. which affect the productivity of the worker. The 1961 Census data on earnings by detailed (three digit) occupation groups will be analyzed to provide estimates of these two types of factors. It must be emphasized that the data necessary to isolate their effects with any degree of precision are unfortunately not available and the evidence presented should be regarded as largely illustrative in nature.

DISTRIBUTIONAL AND "QUALITY" DIFFERENCES

When male and female wage differentials are measured in terms of *annual* earnings it is important to take account of the fact that, on average, women work fewer hours per year than do men. This will, of course, depress their annual earnings relative to those of males. Thus the sex ratio based on annual earnings of *all* wage earners in 1961 was 54.2 per cent but that based on earnings of *full-time full-year* workers only² was 59.3 per cent. The effect of part-time or part-year employment of females was more noticeable in some occupational categories than others as may be observed from Table 16. Thus the ratio of just over 43 per cent for professional workers was increased by nearly 18 percentage points, or over 40 per cent, and a similar marked rise is observed for other white collar categories, clerical and sales. Much more moderate changes occurred in the manual, service

¹ Other relevant distributional differences, such as rural-urban residence, region, industry, cannot be explored because of lack of required data.

² Wage earners who worked in 49 to 52 weeks, (usually) 35 hours or more per week in the twelve months preceding June 1961.

and primary occupations, in part because men were also subject to "under-employment" in these types of jobs. In order to remove the effect of variations in the work year as between men and women and among different occupations the present analysis will be based on the earnings of full-time, full-year workers only.

Table 16 - Sex Ratios^a in Annual Earnings, 1961, All Wage Earners and Full-Year^a Wage Earners: Canada, 1961

Occupation	Sex ratio	
	All wage earners	Full-year ^b wage earners
All occupations	54.2	59.3
Managerial	48.1	51.6
Professional and technical	43.3	61.2
Clerical	60.8	74.1
Sales	35.2	44.8
Service and recreation	47.4	47.2
Transportation and communication	62.2	69.4
Farmers and farm workers	43.3	59.6
Craftsmen, production process and related workers	50.1	55.7
Labourers	67.2	66.9

^a Ratio of average annual wages and salaries of all female wage earners to average annual wages and salaries of male wage earners. ^b Ratio based on average annual wages and salaries of wage earners who had worked in 49 to 52 weeks, usually 35 hours or more per week in the twelve months preceding June 1961. Occupational classes reporting fewer than 10 women were omitted. The total number of occupational classes selected was 256.

SOURCE: Based on published and unpublished data from 1961 Census.

While the greater incidence of part-year employment among women explained a part of the male-female gap in earnings, a more important reason for the sex differential was the relatively (to men) unfavourable occupational distribution of the female work force. Because women tended to work in lower-paid jobs than did men, the average earnings gap was greater than the actual pay differences occupation by occupation. This is demonstrated in Table 17 which shows (line 3) that if the occupational distribution of the female and male work force were identical the sex ratio in earnings would have been 67.2 to 65.6 per cent.¹ Thus *distributional differences* accounted for 7.9 to 6.3 percentage points of the initial 41-percentage-point difference

¹ The two indexes shown in Table 17 are analogous to the two price indexes, Laspeyres and Paasche. See, for similar calculations, Morton Zeman, *A Quantitative Analysis of White-Nonwhite Income Differentials in the United States*, Doctoral Dissertation, University of Chicago, 1955, Chapter III (mimeographed) and Henry Sanborn, "Pay Differences between Men and Women" *Industrial and Labor Relations Review*, July 1964. The two indices differ because of the correlation between wage and distributional differences between men and women.

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in annual earnings between (full-year) men and women workers.¹ Another 5.3 to 2.9 percentage points were accounted for by age differences between men and women (line 4), i.e. by the fact that men were older and presumably more experienced in the job.² Finally, adjusting for differences in educational level between men and women raised the sex ratio by another 6.7 to 5.4 percentage points (line 5). It should be noted that the effects of the two "quality" adjustments were additive, i.e. that the two factors appeared to be independent of one another. It should be noted, to avoid a misleading impression, that the analysis does not suggest that age and education were independent of each other but only that sex differences in age and education (as among the 256 selected occupational classes on which the calculations were based) were not correlated.

In summary, as may be seen from the last line of Table 17, the sex ratio, adjusted for distributional and "quality" differences between the male and female labour force, was 78.85 per cent instead of 54 per cent (for all wage-earners) or 59 per cent (for full-year workers). This leaves "unexplained" an earnings gap of 15 to 22 per cent, which, while still substantial, is far less than the differential of close to one-half observed in the unadjusted data. The adjustments which were made were very rough—distributional differences other than occupational were not taken into account nor were a number of important "quality" factors such as those stemming from male-female differences in turnover, work experience, absenteeism, etc. More detailed adjustments would no doubt have reduced the "unexplained" gap even further. However it seems clear that some portion of the residual differential stemmed from "discrimination", i.e. from the fact that women were paid less than men for comparable work.³

¹ Two complementary distribution indexes may be calculated corresponding to the two price indexes. These are

$$\frac{\sum p_f q_f}{\sum p_f q_m} \text{ and } \frac{\sum p_m q_f}{\sum p_m q_m}$$

[see any standard statistical text dealing with price indexes, for example, Frederick C. Mills, *Statistical Methods* (Chapter 13) (London :1955). The "female weight" distribution index is 79.2; the "male weight" index is 74.1. Thus, by these measures "income" differences accounted for 33 per cent to 34 per cent of the gross differential and occupational distribution differences for 21 per cent to 26 per cent.

² Age was used as a "proxy" for work experience because no other data were available. Clearly, especially in the case of women, many of whom return to the labour force in middle age after years of absence from the work world, the association between age and experience is not always close.

³ There were undoubtedly differences in the type of work performed within the occupational classes used in this analysis since they are by no means homogeneous. However, finer occupational detail was not available.

SEX RATIOS FOR MAJOR OCCUPATIONAL GROUPS

Table 17 – Sex Ratios^a in Annual Earnings: Unadjusted and Adjusted Data, 1961: Canada, 1961

Adjustment factor	Sex ratio ^a	
	Female weights ^b	Male weights ^c
(1) Unadjusted	54.2	
(2) Annual hours worked ^d	59.3	
(3) Occupational distribution	67.2	65.6
(4) Age ^e	72.5	68.5
(5) Education ^f	79.2	74.1
(6) Age and education	85.0	77.5

^a See Table 16.

^b $\sum p_f q_f$

$\sum p_m q_f$ where p_f and p_m are the mean earnings of full-time, full-year [see (4)] males and females respectively in each of the 256 selected occupational classes and q_f is the proportion of females in each of the selected classes.

^c $\sum p_f q_m$

$\sum p_m q_m$ where q_m is the proportion of men in each of the selected occupational classes.

^d Ratio based on annual wages and salaries of wage earners who had worked in 49 to 52 weeks, usually 35 hours or more per week.

^e Earnings of females in each occupational class were multiplied by the ratio of (median) male age to (median) female age and new weighted averages calculated.

^f Earnings of females were adjusted by the ratio of male educational level to female educational level. The indicator of educational level used was the percent of the work force having completed high school education or better.

SOURCE: Based on published and unpublished data from 1961 Census.

SEX RATIOS FOR MAJOR OCCUPATIONAL GROUPS

Pay differences between men and women were by no means uniform among the major occupational divisions of the work force. As will be observed in Table 18, the variation in sex ratios was apparent both before and after adjustments were made for distributional and "quality" differences between male and female workers. The effects of adjustment were, with one exception,¹ to raise the sex ratio in earnings, i.e. to narrow the pay gap between the sexes. The most remarkable rise occurred in the two manual occupational categories, craftsmen and semi-skilled workers and labourers. Taking into account the deficiencies in data and method these results none

¹ The decline in the adjusted sex ratio for farm workers was entirely a consequence of the age adjustment factor. In 1961 the average age of male farmers was well above that of the male work force (see Sylvia Ostry, *The Occupational Composition.....*, op. cit.) and certainly very much higher than that of the female farm worker. Because of the deficiencies of the data on the female farm work forces (see *ibid*, pp. 17-18, 29 and 44) and the crudity of the age adjustment factor, it would be unwise to place too much reliance on these results.

the less support the conclusion that "discrimination" — in the limited sense in which the term is used here — was not a significant phenomenon in manual jobs in 1961.

Table 18 — Sex Ratios^a in Annual Earnings of Full-Time, Full-Year Wage Earners, Adjusted^c and Unadjusted Data, by Selected^b Major Occupations, 1961: Canada, 1961

Occupation	Un-adjusted	Adjusted ^c		Percent change in ratio from adjustment	
		Female weights	Male weights	Female weights	Male weights
All occupations	59.3	85.0	77.5	43.3	30.1
Managerial	51.6	67.3	63.1	30.4	22.2
Professional and technical	61.2	66.9	74.1	9.3	21.1
Clerical	74.1	90.0	87.2	21.4	17.7
Sales	44.8	70.8	67.4	58.0	50.4
Service and recreation	47.2	76.9	61.9	62.9	31.1
Farmers and farm workers	59.6	51.2	52.0	- 14.1	- 11.8
Craftsmen, production process and related workers ^c	55.7	115.1	105.3	106.6	89.0
Labourers	66.9	98.1	86.2	46.6	28.8

^a See Table 16. ^b Occupational classes or divisions having fewer than 10 full-time, full-year female wage earners were omitted. The transportation and communication occupational category was excluded because of the highly disparate distributions of male and female workers. Almost 94 per cent of women, but less than 1 per cent of men, in this occupational division were reported in one class: telephone operators. ^c Adjusted for male-female differences in occupational distribution, age and education. See Table 17.

SOURCE: Based on published and unpublished data from 1961 Census.

The sex ratio, although reduced by adjusting for distributional and qualitative factors, remained substantial in the "high status" occupations, managerial and professional. While it is not shown in Table 18, an examination of the separate effects of each adjustment reveals that in both these occupational categories the distributional factor was more important than quality differences in accounting for the pay gap between men and women. Thus, within the high-level occupational categories, disproportionately more women than men worked at lower paid jobs (which in itself may be evidence of some restriction in job opportunities, another form of "discrimination") and, job for job, there were above-average pay differentials between the sexes. In clerical occupations, on the other hand, a lower-level white collar category, the sex ratio was very high (i.e. pay differences were small) both for the unadjusted and adjusted data. For these occupations the distributional factor contributed little to closing the gap and of the two "quality" factors, education was the more important.

The two remaining occupational groups, sales and service, exhibited rather similar characteristics. The unadjusted sex ratios revealed a substantial gap in pay between the sexes. The effect of adjustment was to raise the earnings ratios markedly — though they remained at a level somewhat below the all-occupation average. In the sales group, distributional and education factors were more important than were age adjustments in reducing the sex differential. As has been pointed out in another study in this series, sales jobs, requiring little in the way of experience or training, provided employment opportunities for many middle-aged and older female labour force "re-entrants".¹ In this category, then, the age adjustment factor, used as a surrogate for work experience, was especially unreliable and the results must be viewed with caution.

In summary, this discussion of earnings differences between men and women has revealed that even after "accounting for" differences in the work year, occupational deployment and "quality" of labour between the sexes, there remained fairly sizeable pay gaps between male and female workers in Canada. More refined and more detailed data would permit a more thorough investigation of the extent and nature of sex differences in earnings and, more particularly, their variation as among the major types of jobs or occupational categories.

¹ Cf. *Ibid.*, pp. 35-36.

5. *Conclusions*

The period following the Second World War witnessed a remarkable rise in the labour force activity of women in Canada. In analyzing these changes, this Study has focused on the decade of the 1950s since the use of decennial census data requires us to view history in decadal segments. In the present instance any distortion caused by this peculiarity of vision is not serious since the changing role of women in the world of work is essentially an evolutionary development, founded on long-run, fundamental social and economic trends, and precise dating of the initiation of the development is a matter of little consequence. The rise in participation of middle-aged and older married women, which was the essential feature of the marked change in female labour force activity as revealed by the 1951 and 1961 Censuses, was linked to the experience and events of an earlier period at least as much as to the environmental circumstances of the date of its occurrence.

The intention of the study was both expository and analytical. The major changes in participation of differing groups in the female population are relatively easily documented, despite some gaps in information, and this report set forth, in some detail, most of the available data in this area. Further, some of the more important factors influencing the labour market activity of women—demographic, social and economic—were explored but this exercise served chiefly to highlight the complex nature of the phenomenon under consideration and to emphasize the need for more sophisticated, more intensive analyses of both a theoretical and empirical nature. It is, perhaps, ironical that the main conclusion of this Study, concerned as it was with dramatic change, is an echo of a favourite shibboleth of our society—that women are difficult creatures to understand!

Appendix

A NOTE ON THE VARIATION OF PARTICIPATION RATES OF MARRIED WOMEN IN CANADA

In the foregoing text, the influence of a variety of factors—demographic, social and economic—on the labour force participation of married women was demonstrated by means of two- or three-way classification tables and other simple statistical devices. The purpose of this note is to estimate the separate and combined influence of these factors (and categories within factors) by means of a more powerful analytical tool, regression analysis with dummy variables.¹ The techniques used are described in another Study in this Series, *Provincial Differences in Labour Force Participation*. The data were derived entirely from the population sample of the 1961 Census and relate to married women in normal (husband-wife) families.

The basic input for the regressions consisted of labour force participation rates for married women cross-classified as follows:

Regression A: Child status (3), Income of husband (6), Age of wife (4),
Residence (2), Region (5).
Total number of observations = 720

Regression B: Child status (3), Income of husband (6), Education of wife (3),
Residence (2), Region (5).
Total number of observations = 540

In addition, separate equations were run for each of the four age categories and each of the three education categories. The factors and categories are displayed in Table A.1.

ANALYSIS OF VARIANCE

Table A.2 provides the basic information on the relative importance of each factor in the two main regressions.² It will be observed that the results are rather different when age was included as an independent variable (Regression A) rather than education (Regression B). Not only was the total level of explanation improved in the latter case (72.5 per cent as compared with 66.2 per cent) but the relative importance of the other variables—child status, income, region and residence—was also changed. Thus while the contribution of child status was very substantial in both regressions, it was far higher in A than in B. The reverse was true of income, i.e. it explained a far higher percentage of the total variation when education rather than age was included in the equation. One interpretation

¹ I am indebted to Mr. N. Skoulias of the Econometrics Division of Dominion Bureau of Statistics for preparing the regression results for this Note.

² Because of the form of the regression, the analysis of variance was obtained directly from the regression output. Cf. Sylvia Ostry, *Provincial Variations*, op. cit., and reference to N.H.W. Davis cited in Appendix, p. 30.

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Table A.1 - Regression Input Data: Cross-classification of Labour Force
Participation Rates of Married Women in Canada, 1961

NOTE.—All data were derived from the population sample of the 1961 Census.
They relate to married women in normal, i.e. husband-wife families.

Factor	Specifications of category
Child status	(1) Some children in family under six years of age (2) Some children in family, none under six years of age (3) No children in family
Income ^a of husband (\$)	(1) less than 1,000 (2) 1 - 3,000 (3) 3 - 5,000 (4) 5 - 7,000 (5) 7 - 10,000 (6) 10,000 and over
Age of wife (years)	(1) 15 to 24 (2) 25 to 34 (3) 35 to 44 (4) 45 to 64
Education	(1) Elementary school or less (including no schooling) (2) High school, some or completed (3) University, some or completed
Residence	(1) Urban (2) Rural non-farm
Region	(1) Atlantic Region (2) Quebec (3) Ontario (4) Prairie Provinces (5) British Columbia

^a Total income.

of these results is that—as has been shown by studies of U.S. data¹—there is a strong association between the income of husbands and wives which is “masked” when wives’ education (a good proxy for their earning power) is not included as an explanatory variable. Thus in equation A, the “push” and “pull” effects of husbands’ and wives’ income (as described in the text) tend to cancel out, very much reducing the explanatory power of husbands’ income. Further, in equation A, child status may be “picking up” some of the effect of wives’ education.

¹ Cf. especially Mincer, *Aspects of Labor Economics*, op. cit.

Table A.2 – Components of Total Variance in Two Regression Analyses of Labour Force Participation of Married Women in Canada, 1961

Factor	Regression	
	A	B
percent of total sum of squares		
Main effects		
Child status	39.48	20.93
Income of husband	9.44	21.82
Region	6.71	4.99
Residence	5.99	1.23
Age of wife	4.61	—
Education of wife	—	23.57
Total explained variance	66.23	72.54
Second order interactions		
Child status/region	1.22	0.57
Child status/residence	1.16	0.41
Child status/age	5.76	—
Child status/education	—	1.95
Income/child status	1.38	1.57
Income/region	1.92	1.49
Income/residence	1.91	1.17
Income/age	0.82	—
Income/education	—	5.31
Region/residence	0.32	0.24
Region/age	0.41	—
Region/education	—	0.93
Residence/age	1.19	—
Residence/education	—	0.54
Third, fourth and fifth order interactions	17.68	13.28
Total variance	100.00	100.00

In more general terms, the analysis of variance results underline the importance of the demographic variable (child status) and the socio-economic variables (husbands' income and own education) in influencing the labour force activity of married women. The effects of region and residence were of far less importance. Finally, an examination of the second order interactions suggests it would be useful to run separate equations controlled for age of wife and for education of wife. The sizeable interaction effect between child status and age on the one hand and between income and education on the other point to the presence of a non linear relationship between the dependent variable and child status and income respectively.

REGRESSION RESULTS

Tables A.3 and A.4 present the regression results for the two main regressions and those controlled for age and for education. The following examples will illustrate how the Tables can be read:

(1) In 1961, the participation rate of married women, aged 25-34, with pre-school children, whose husbands had incomes of \$5-7,000 and who lived in urban areas of Ontario was estimated to be:

$$23.933 + 4.278 - 13.586 - 0.288 + 4.478 + 5.778 = 24.593\%$$

(2) The estimated participation rate of married women with no better than elementary school education, having husbands with incomes of \$3-5,000 and some children but none under six, living in rural (non farm) areas in Quebec was:

$$25.138 - 9.794 + 4.623 + 2.841 - 1.991 - 6.052 = 14.810\%$$

As a further aid to using the Tables it should be noted that a difference of twice the standard error of the coefficients (shown in brackets) may be taken as approximating a 5 per cent level of significance.

From Table A.3 it will be observed that participation rates of married women in 1961 were significantly lower if they had pre-school children (rather than older children or no children at all), if their husbands had incomes above \$7,000, if they were over the age of 45, living in rural areas rather than cities and in Quebec or the Atlantic Region rather than elsewhere in Canada. The strongest effect on participation was exerted by the child status variable. After taking all the other factors into account, the participation rate of married women with pre-school children to be cared for in the home is almost 14 percentage points below the average rate.¹ [In contrast, the presence of older children (over six) had a negligible depressant effect on mothers' participation]. Living in eastern Canada (Quebec or the Atlantic Provinces) was also a strong deterrent to labour market activity.

The effect of husbands' income, as suggested in the main Study, varied with the level of income. It was positive, although not always significant, at levels below \$5,000 and strongly negative at the top end of the income scale. Since, however, these coefficients are to be considered in relation to the constant term and the positive coefficients decline as income rises—turning negative at the \$5,000-\$7,000 category—participation, in effect, declines steadily with rising income but the decline is much more rapid at the “threshold” level. This is clearly apparent from Chart A-1.

¹ Because of the form of data input—and of the regression programme used—the overall average or constant term represents the unweighted mean of the observations and this should be kept in mind in interpreting the results.

Table A.3 – Regression Equations Type A (includes age): Participation Rate Analysis of Married Women in Canada, 1961

NOTE. – The form of the regression equation was:

$$y = \sum_{i=0}^n b_i x_i$$

Where y = participation rate of married women

$$x_0 = 1$$

$x_1 = 1$ if some children under 6, 0 otherwise

$x_2 = 1$ if no children under 6, 0 otherwise

$x_3 = 1$ if no children, 0 otherwise

$x_4 =$ income of husband 10,000, 0 otherwise

and similarly for the remaining factor-category designations.

Age of wife	Regression equation	Child status	Income of husband \$	Coefficients of:			
				Age of wife	Residence	Region	
14 - 64 years	$R^2 = .662$ N = 720 Constant = 23.933	Some children ≤ 6 No children ≤ 6 No children	-13.586 -0.933 +14.519	-8.925 -5.604 -0.288	15 - 24 25 - 34 35 - 44	+0.198 +4.278 +1.844	Atlantic Quebec Ontario Prairies B.C.
			10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	15 - 24 25 - 34 35 - 44 45 - 64 45 - 64	+0.198 +4.278 +1.844 -6.320	+4.478 -4.478	-4.229 -6.801 +5.778 +3.320 +1.932
			(0.9813)	(1.3877)	(1.1331)	(0.8012)	(1.2668)
15 - 24 years	$R^2 = .620$ N = 180 Constant = 24.132	Some children ≤ 6 No children ≤ 6 No children	-15.332 -3.968 +19.300	-9.567 -5.315 +1.325	Urban Rural	+7.167 -7.167	Atlantic Quebec Ontario Prairies B.C.
			10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	+6.420 +6.420 +6.978 +0.160			-4.993 -4.425 +6.658 +1.251 +1.511
			(2.6261)	(3.7138)	(2.1442)		(3.3902)

Table A.3 - Regression Equations Type A (includes age): Participation
Rate Analysis of Married Women in Canada, 1961 (concluded)

Age of wife	Regression equation	Child status	Income of husband \$	Coefficients of -		Region
				Age of wife	Residence	
25 - 34 years	R ² = .833 N = 180 Constant = 28.211	Some children < 6 No children < 6 No children	-17,281 - 2,086 +19,367	-9,492 -6,852 -0,215	Urban Rural	+5,315 -5,315
	(Standard error of coefficients)		10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	-6,852 -0,215 +3,226 +7,545 +5,789 (2,1783)		Atlantic Quebec Ontario Prairies B.C.
35 - 44 years	R ² = .796 N = 180 Constant = 25.777	Some children < 6 No children < 6 No children	-14,889 + 0,033 +14,856	-9,265 -6,573 -0,697	Urban Rural	+3,644 -3,644
	(Standard error of coefficients)		10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	-6,573 -0,697 +2,212 +6,359 +7,966 (2,0266)		Atlantic Quebec Ontario Prairies B.C.
45 - 64 years	R ² = .714 N = 180 Constant = 17.613	Some children < 6 No children < 6 No children	- 6,846 + 2,290 + 4,555	-7,376 -3,676 -1,568	Urban Rural	+1,790 -1,790
	(Standard error of coefficients)		10,000+ 7 - 10,000 3 - 7,000 3 - 5,000 1 - 3,000 < 1,000	-3,676 -1,568 +1,350 +5,161 +6,107 (1,4030)		Atlantic Quebec Ontario Prairies B.C.

Table A.4 – Regression Equations Type B (includes schooling): Participation Rate Analysis of Married Women in Canada, 1961

NOTE. – See Table A.3.

Schooling of wife	Regression equation	Coefficients of –									
		Child status	Income of husband \$	Schooling of wife	Residence	Region					
All levels of schooling	$R^2 = .725$ $N = 540$ Constant = 25.138	Some children < 6 No children < 6 No children	-11.175 + 2,841 + 8,334	10,000+ 7-10,000 5-7,000	-13.117 - 8,039 - 1,438	Elementary High school University	- 9.794 - 1,584 +11,378	Urban Rural	+1.991 -1.991	Atlantic Quebec Ontario	-3.407 -6.052 +3.551
				3-5,000 1-3,000 < 1,000	+ 4,623 + 8,497 + 9,474					Prairies B.C.	+3.971 +1.937
		(Standard error of coefficients)		(1.0058)	(1.4224)		(1.0058)	(0.8212)	(1.2985)		
Elementary or less	$R^2 = .719$ $N = 180$ Constant = 15.344	Some children < 6 No children < 6 No children	- 6,712 + 2,163 + 4,548	10,000+ 7-10,000 5-7,000	- 3,466 - 4,622 - 2,755			Urban Rural	+2,752 -2,752	Atlantic Quebec Ontario	-4.282 -4.256 +4.911
				3-5,000 1-3,000 < 1,000	+ 1,044 + 4,701 + 5,098					Prairies B.C.	+2.328 +1.299
		(Standard error of coefficients)		(0.9156)	(1.2948)			(0.7476)	(1.1820)		

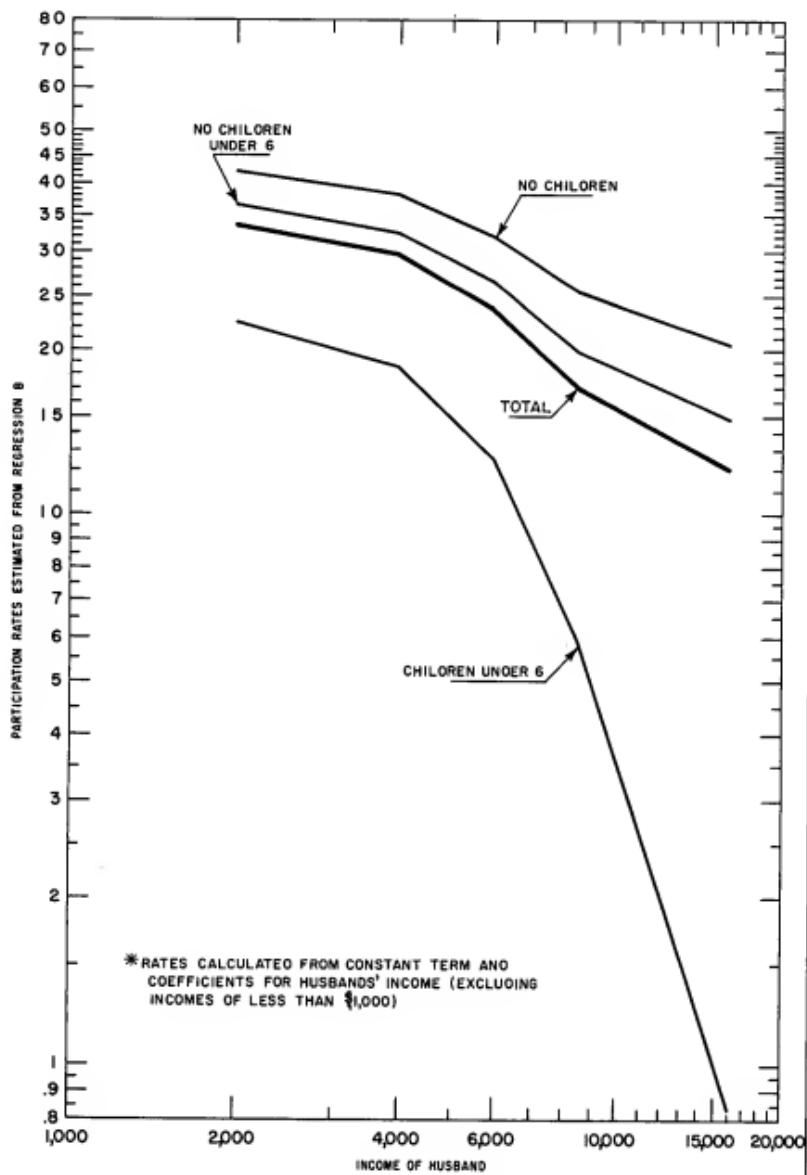
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Table A.4 - Regression Equations Type B (includes schooling): Participation
Rate Analysis of Married Women in Canada, 1961 (concluded)

Schooling of wife	Regression equation	Coefficients of -				Region			
		Child status	Income of husband \$	Schooling of wife	Residence				
High School, some or completed	$R^2 = .847$ $N = 180$ Constant = 23.554	Some children < 6 No children < 6 No children	-12.189 + 2.598 + 9.591	10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	-12.840 - 8,533 - 1,223 + 4,577 + 8,444 + 9,576	Urban Rural	+3.092 -3.092	Atlantic Quebec	-4.093 -5.556
	(Standard error of coefficients)		(1.0810)	(1.5287)			(0.8826)		(1.3955)
University, some or degree	$R^2 = .718$ $N = 180$ Constant = 36.517	Some children < 6 No children < 6 No children	-14.626 + 3.764 +10.863	10,000+ 7 - 10,000 5 - 7,000 3 - 5,000 1 - 3,000 < 1,000	-23.044 -10.964 - 0.337 + 8,249 +12.345 +13.749	Urban Rural	+0.132 -0.132	Atlantic Quebec	-1.847 -8.347
	(Standard error of coefficients)		(2.1220)	(3.0009)			(1.7326)		(2.7395)

CHART — A-1

ESTIMATED RELATIONSHIP BETWEEN WIVES' PARTICIPATION*
AND HUSBANDS' INCOME



Finally, it will be observed that the peak participation rate was estimated for women aged 25-34 years—which appears to contradict the findings based on observation of the age profiles presented in the text. For this reason it would have been interesting to examine more detailed data to locate more precisely the maximum rate. Such data were not, however, available.

When the regressions were controlled for age the findings were generally the same except for better "fit" (the higher R^2 's of all but the equation for 15-24-year-olds) and, as was expected from the analysis of variance, the effect of child status. The influence of child status was relatively¹ more marked for the younger women (15-24 and 25-34) than for women over the age of 35. Further, the presence of older children (over six) was a deterrent to the participation of women under 35 but not so in the case of women in the two older age groups. It seems reasonable to assume that these results reflect the differing "age mix" of the children of younger and older mothers and the differing weight of child care responsibilities. Younger women were likely to have both pre-school and young school-age children, both of whom require a great deal of supervision and care in the home. The children of older women were themselves likely to be older, requiring less attention from their mothers and capable, to some extent, of sharing the responsibility of looking after pre-schoolers. It should be observed, in this connection, that the difference between the participation of childless women aged 45-64, and those with older children was barely significant.

Table A.4 presents the regression results for the equations which included wives' education rather than age as one of the independent variables. An examination of the first equation (all education levels) points up some interesting comparisons with regression A (including age). The better "fit" has already been noted in the discussion of variance analysis—education was a more powerful "determinant" of the labour market activity of married women than is age. Further, the "deterrent effect" of pre-school children, while still very strong, was relatively less marked when the educational attainment of the wives was taken into account. (Note, too, the positive sign of the coefficient for the child status category of older children.) The effect of husband's income was generally the same as in regression A, i.e. weakly positive at levels below \$5,000 and strongly negative at higher levels—but the negative effects were relatively much more marked, especially at the very highest level of income. The coefficients for each of the education factor-categories were all significant and

¹ Relative, that is, to the constant term.

the powerful "pull" effect of a university education was clearly evident. More surprising was the below-average participation of the group with high school education. This should be interpreted in relation to the constant term and, as may be seen in Chart A-2, the overall relationship between participation and wives' education is strongly positive. The regional influences were similar to those observed in the earlier discussion, but the effect of residence was very much weaker. Residence is a slippery variable to deal with since it really is, in large degree, a surrogate for a complex of socio-economic conditions. In regression A, it may have "absorbed" some of the education effect.

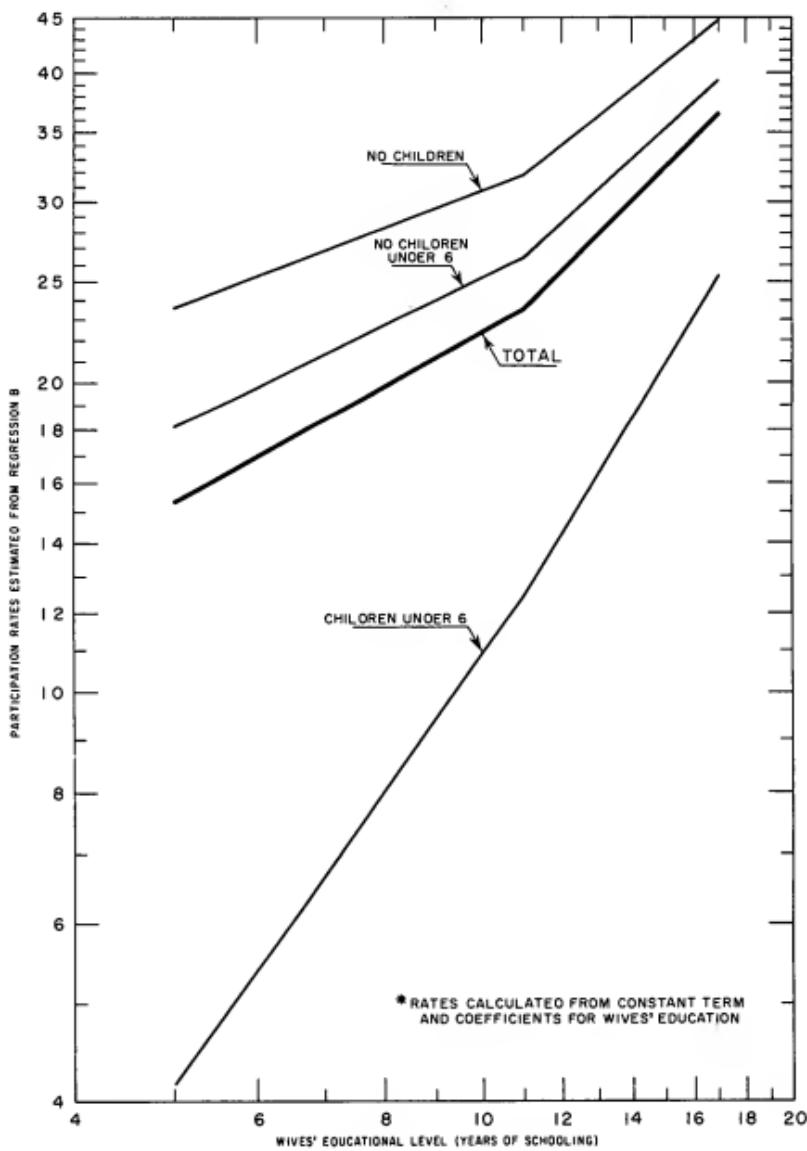
As was anticipated by the analysis of variance, the regressions based on the disaggregated data (i.e., controlled for education) did, in fact, reveal some noteworthy contrasts in respect to the influence of husbands' income. At the highest levels of income (\$10,000 and over) the negative effect on participation was much more marked—absolutely and relative to the overall mean—for wives with high school and university education than for poorly educated wives. For the intermediate level, however, of \$5,000-\$7,000—at which the sign of the income coefficients changed from positive to negative—the reverse situation prevailed, i.e. the labour force withdrawal was much stronger among poorly educated than better educated women. It was weakest for the most educated group.

It is easier to muster a plausible explanation of the latter phenomenon than of the former. Poorly educated women generally have the least attractive job opportunities open to them and, presumably, their motivation for working is primarily economic (once account is taken of the demographic and other important influences on labour market activity). One might expect them to leave the labour market when their husbands' income reaches a level sufficient to "satisfy" the family needs—the "threshold" level, observed in the regression results, at which the direction of the income effect changes from positive to negative. For better educated women, however, the job opportunities are more varied and interesting and, hence, the "pull" into the market (for both economic and psychological reasons) greater. Reaching the "threshold" level of husbands' income, then, should not result in the same marked withdrawal.

While this line of reasoning provides a plausible explanation of the differences observed among the three education groups with respect to the "threshold" or "critical" income level, it appears to be contradicted by the findings relating to the very high levels of income. Two observations are relevant here, but further analysis, with more detailed data, is obviously required before even tentative conclusions can be reached. First, it should be noted that the mean of the open-ended income category, "\$10,000 and

CHART-A-2

ESTIMATED RELATIONSHIP BETWEEN WIVES' PARTICIPATION*
AND WIVES' EDUCATION



over", was likely very different for each of the three education groups and undoubtedly very much lower for the most poorly educated than for the other two. A similar analysis, based on more income detail at the upper end of the distribution, might have revealed a quite different relationship among the three education groups for comparable levels of income. Secondly, the absence of age information in this set of regressions was particularly unfortunate since it prevented testing another hypothesis: *viz.* that poorly educated women with relatively "rich" husbands were, on average, somewhat older than their better-educated counterparts. This hypothesis assumes a positive association between husbands' and wives' education and age, implying further that poorly educated husbands achieve higher levels of income only near the end of their working lives. If older, these women may have had a somewhat stronger job attachment than did their counterparts in the higher education groups. While child status is, to some extent, a "proxy" for age it may not have "picked up" this particular age effect.

Finally, Charts A-1 and A-2 illustrate the contrast in degree and direction of response of the participation of married women to their husband's income and their own education (in part, a proxy for their earning power). These Charts were prepared from the results of Regression B and, hence, take into account the effects of child status, residence and region. The use of double log scales permits a rough comparison of elasticities and provides a visual illustration of the greater strength of the "pull" effect (of wives' earning ability) than of the "push" effect (of husbands' income) described in the main text.

1961 CENSUS MONOGRAPHS
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The above are the first studies to be published of the Census Monograph Programme and are expected to be available intermittently, in separate English and French editions, from the Queen's Printer and the Dominion Bureau of Statistics (Publications Distribution Unit) during 1968 and 1969. The list will be augmented as work on other studies progresses.

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